Reconciling individuality with social solidarity

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Forming Social Identity From The Bottom Up

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Chapter 1

GENERAL INTRODUCTION

How can we reconcile individuality with strong social solidarity? In today's society individuals are increasingly independent of each other and their direct environment for shaping their own lives. On the one hand, this can be seen as a highly valued modern achievement. On the other hand, many people fear that this trend towards individualization threatens social cohesion and solidarity. Individuals may become increasingly selfish and unwilling to take the interest of others or the collective at heart. Although both individuality and social solidarity are highly valued, the general assumption is that the two are somehow opposites of one another. Society can *either* consist of independent individuals and fall apart *or* consist of interdependent citizens and be highly cohesive. Groups can *either* have diversity and conflict *or* have homogeneity and unity. Individuals can *either* be distinctive from others and alone *or* be similar to others and included. In other words, the distinctiveness of individuals is thought to undermine the unity and cohesiveness of collectives and, vice versa, an overly strong attachment to collectives is thought to threaten individual distinctiveness. But is this assumption always correct? Or is it possible to form groups in which individual distinctiveness and group membership can come into agreement?

In the present dissertation, we[1] argue that such reconciliation is possible. We propose that individual group members can actively contribute to the formation of shared group identity—a bottom-up process that involves each group member as an individual. These *inductive* processes of group formation, we argue allow for feelings of individual distinctiveness and feelings of strong group attachment to become mutually reinforcing. In other words, there can be a reciprocal and positive association between feeling and acting independently, and a strong sense of attachment to the group. In this way, individuality and social cohesion become *positively* interdependent.

The possibility of inductive processes of social identity formation and the reconciliation between individual and group it may provide is explored in different ways in the research conducted over the course of this dissertation project. More specifically the following questions are addressed: Can people feel individually distinct and at the same time identify with a group? Can people identify with a group and at the same time express individuality? Can groups be diverse but at the same time develop strong unity and group cooperation? All these questions are addressed in different chapters by focusing on the way in which groups are formed. We propose that the degree to which individual group members plays an active part in the formation of the group's social identity has important consequences for the relation between individual and group.

Together these different lines of research provide a novel insight in the interplay between individual distinctiveness and group membership. While being a distinctive individual can be difficult in groups whose identity

[1] I use the term "we" instead of "I" throughout this dissertation as I feel that this dissertation is a product of my collaboration with my advisors —Tom Postmes and Karen van der Zee — and others. "We" is based on all our individual contributions (or using the words in this dissertation; we is *inductively* formed).

is formed on the basis of superordinate commonalities that are imposed on members top-down as might for instance be the case in the army or the police (a mechanical or *deductive* process), this dissertation shows that individuality can be reconciled more easily with strong social cohesion when group identity is formed organically (or *inductively*) out of individuals' contributions. The purpose of this dissertation is not just to illustrate how individual differences can be integrated in (small) groups, but also to point to a new direction for thinking about social cohesion in general, and about social identity processes in particular. We believe that adopting this new (more organic) perspective on how individuals co-operate to dynamically construct a sense of individuality and social cohesion provides interesting new insights. Taking into account not just how groups and individuals are cognitively perceived but also how they physically interact, enhances the capacity to use theoretical concepts such as "social identity" and "individuality" to explain group processes and group functioning, and does justice to the complex interplay between the individual and the group in modern Western society.

By way of introducing the different lines of research and the associated studies, we will first sketch some of the theoretical foundations upon which this dissertation is built. We will start by elaborating the societal importance of understanding the relationship between individuality and group membership, and will discuss one of the most influential perspectives on this relationship within social psychology, provided by the social identity approach. Next, we will discuss alternative research and theoretical models that challenge the antagonistic relationship between individuality and group membership as assumed by social identity theorists. After describing these differential perspectives on groups and group formation, we will introduce our theoretical model of social identity formation and the interplay between

the individual and the group it proposes. Finally, we will explain how this model is tested in the different chapters.

Theoretical Background

During the last decades, Western societies have become increasingly individualistic (see SCR, 1998, for statistics in the Netherlands). This could be seen as the latest developments in an on-going trend that has its roots in the renaissance (Elias, 1939/2000), although some trace it to an even earlier "discovery" of the individual in the late Middle Ages (Morris, 1972). Either way, it seems that increased urbanization, industrialization, and technology have created the opportunity for individuals to be increasingly independent of each other and their direct environment. Within individualistic cultures (Hofstede, 1980; Triandis, 1995), individuals appear to experience personal matters (goals, uniqueness, control) as central to life whereas collective matters are pushed to the periphery of their awareness (Markus & Kitayama, 1991; Triandis, 1995).

Many have feared that this trend towards individualization hampers a sense of solidarity and communion in society. Putnam (2000) uses the metaphor "bowling alone" to describe the disappearance of particular forms of American communal activities and relates this to a striking elevation of the level of individual independence during the 1980s and 1990s. An example in the Netherlands can be found in the present debate about whether the solidarity principle in health insurance still fits today's individualistic society.

But the more society embraces the agency of the individual as our (collective) ideal, the more nagging doubts and suspicions about this trend are voiced. Not surprisingly: group memberships are undeniably important

for the well-being of individuals, and the viability of society is dependent on active and willing cooperation towards common goals and by common moral standards. One illustration of this paradox can be found in the area of health. On the one hand, individuals are increasingly being held responsible for their own (mental) health (Dehue, 2008). For example, children's hyperactivity is increasingly seen as an internal "illness" that should be cured by the child taking medication and undergoing treatment. At the same time, research confirms the common sense idea that health, well-being, and the successful recovery from illness are furthered if individuals are members of (many or strong) social groups (Jetten, Haslam, & Haslam, 2011) and that loneliness is a killer (Cacioppo, Hawkley, & Berntson, 2003).

The Dutch queen described this issue in her 2012 Christmas speech, stating that collective solidarity is necessary for individuals' full expansion and society not falling apart. Thus, in a society that is becoming increasingly individualistic, there is an increasing concern that some essential social qualities are vanishing: solidarity is being eroded and communities are falling apart (e.g., Putnam, 2000). Indeed, in a society where the rise of the individual comes with the fall of collectives, there is cause for concern. But in this dissertation, we suggest that in many ways individuality and community do not need to be antagonistic: rather than assuming that individuality and society are at opposite ends of a spectrum, we can also look for ways in which individuality and group membership *can* be reconciled to one another within particular societies, communities or groups.

The Social Identity Approach

The widespread assumption that the individual and the group are in opposition is not just restricted to lay theorists but is also present throughout the social sciences (see Tilly, 1973, for a review). Within social psychology, the social identity approach seems to have played a particularly central role in shaping thoughts about the relationship between being a distinctive individual and being a group member.

Social identity theory. Social identity theory (SIT; Tajfel & Turner, 1979) proposes that human beings are not merely individuals or group members: Individuals are assumed to derive part of their self-concept, their *social* identity, from their knowledge of, and emotional attachment to group membership(s). In other words, individuals are assumed to internalize "the group" into their identity. Furthermore, because people are assumed to strive to think positively about themselves, SIT proposes that people will also strive for positive social identities by seeking positive in-group distinctiveness (Tajfel, 1978a). This should, according to SIT, have various consequences for intergroup behaviour (e.g., discrimination) but for the present dissertation we will focus on those aspects of SIT that are directly relevant for the implied relation between the individual and the group.

According to SIT, people's behaviour is located on an interpersonal-intergroup continuum, ranging from acting in terms of the individual self on one extreme to acting in terms of the group on the other extreme (Tajfel, 1978a). When behaviour is located on the intergroup extreme, ingroup members are expected to show little variance in their behaviour towards members from another group (out-group members), and treat all out-group members similarly, independent of the individual differences between them (Tajfel, 1978a). What is innovative about SIT is

that it assumes that such intergroup behaviour is associated with a psychological shift from defining the self on the basis of self-other categorizations to defining the self on the basis ingroup-outgroup categorizations. This seems to imply that the more individuals act in terms of group membership (at the intergroup end of the continuum), the less they should be able to make self-other distinctions. This suggests that when acting in terms of social identities, individuals' individuality will disappear.

Self-categorization theory. Self-categorization theory (SCT; Turner, Hogg, Oakes, Reicher, & Wetherell, 1987) builds on SIT but focuses more on the process of psychological group formation and its consequences. Distinct from the interpersonal-intergroup continuum proposed by SIT, SCT proposes that human beings can categorize themselves at different levels of abstraction and that these different self-categorizations are hierarchically structured (Turner, 1982; Turner et al., 1987). That is, individuals are assumed to either define themselves as distinctive individuals (in terms of personal identity) *or* self-categorize in terms of shared social category membership (in terms of social identity), and these different hierarchical abstractions are assumed to be "functionally antagonistic". This implies that if one defines the self as a distinctive individual (in a hypothetical situation in which personal identity salience is absolute) one cannot define the self as a group member, and vice versa.

According to SCT, the level of self-categorization influences whether we think and behave as an individual or as a group member (Turner, 1982). When personal identity is salient, individuals are assumed to perceive themselves in terms of individual attributes that distinguish them from other ingroup members. Furthermore, their behaviour is assumed to be driven by personal norms and motives. This has overlap with the

behaviour described by SIT as interpersonal[2]. In contrast, when individuals categorize themselves in terms of shared social category membership, they are expected to have some degree of social consensus about the defining features (e.g. norms, status) and boundaries of the group (Turner, Oakes, Haslam, & McGarty, 1994). Thus as social identity becomes salient and people define themselves in terms of the same shared identity, they see each other as more alike in terms of the defining attributes of this identity, perceive themselves as relatively interchangeable group members, and behave in line with internalized group norms and interests (Turner, 1991; Hogg & Turner, 1987). In this way, individuals' self-perceptions become depersonalized and their personal identity is pushed to the background (Turner, 1982). This process of depersonalization is what, according to SCT makes group behaviour, cohesion, cooperation, and social influence possible.

Following SCT (Turner, 1985), group formation depends on people defining themselves in terms of a shared social identity. A further important development of SCT is that it specifies when social identities become self-defining or (in other words) "salient". This process of self-categorization as a group member is assumed to be more likely to the extent that perceived differences between a set of "stimuli" (i.e., an ingroup) and other sets of stimuli (outgroups) is larger than the differences within each set of stimuli (i.e., differences within groups; Turner, 1985; Turner & Oakes, 1986). To rephrase, self-categorization as a group appears more likely to the extent that between-group differences are larger than the within-group differences:

[2] It should be noted that it appears Tajfel used the term "personal identity" only once, and then in a context in which he appeared to use the term differently than as it is used in SCT (Tajfel, 1978c, p. 159, 161). Thus, if one would place personal identity on the interpersonal end of the continuum, as we are implying here, it appears that one is blending elements of SCT into SIT.

the principle of meta-contrast. For example, it should be easier to see an aggregate of women as a group when other aggregates are composed of men than when other aggregates are also composed of women, and it should be easier to see the Dutch as a group to the extent that they are looking, thinking, and behaving in a more similar way that is different from other nationalities (see also Campbell, 1958). Following the same principle, group members should be seen as more prototypical for the group as a whole to the extent that the perceived differences between a group member and other ingroup members are less than the perceived differences between a group member and outgroup members (Turner & Oakes, 1986). SCT sees this "cognitive redefinition" of the self and other group members as the defining feature of (psychological) group formation, whereas it considers interpersonal dynamics as unnecessary or corrosive to this process (Turner, 1982, 1984). After all, any emphasis on the individual and their personal attributes would undermine the ability to form such depersonalized perceptions (see also Postmes, Spears, & Lea, 1998; Spears & Lea, 1992; Reicher, 1984).

In sum, SCT proposes that there is a functional antagonism between defining oneself as an individual versus as a group member. First, following the principle of meta-contrast, the more salient individuality is and the more within-group differences there are, the less likely it should be that group members define themselves in group terms. Second, the process of depersonalization implies that when individuals *do* categorize in terms of a shared social category, they come to perceive themselves as similar, equivalent, and interchangeable with other group members, and behaviour becomes a function of their group membership. SCT thus seems to imply that individuality and social solidarity cannot go together, and that in a society that is becoming increasingly individualistic, individuals are unlikely

to define themselves as group members and experience a strong sense of solidarity.

Optimal distinctiveness theory. Later work inspired by the social identity approach, described the conflict between individuality and group membership in even sharper contrast. Whereas SCT attributes the functional antagonism between personal and social identity to cognitive-perceptual principles derived from gestalt theory (i.e., the notion that figure and ground cannot be in focus at the same time), optimal distinctiveness theory takes this one step further by proposing that this antagonism is *motivated*. According to Brewer (1991), human beings have two conflicting fundamental needs: a need for belonging and inclusion, and a need for individuation and differentiation from others (see also Codol, 1984; Snyder & Fromkin, 1980). The opposition between these needs seems to imply that one cannot be a distinctive individual and group member at the same time. According to optimal distinctiveness theory, people search for ways to optimally satisfy both needs simultaneously, and a distinctive social identity is seen as a compromise between the two needs. By identifying with an optimally distinctive group, individuals are assumed to equally satisfy their need for inclusion through group membership and their need for differentiation through intergroup comparisons (see also Kampmeier & Simon, 2001). From this perspective, identifying as a distinctive individual (or small-group member) is too narrow and distinctive, and should therefore "threaten" one's need for inclusion (in the sense of not satisfying it sufficiently), whereas identification with a large social category (e.g., a nation) is too broad and inclusive, and should threaten one's need for distinctiveness. This reasoning seems to imply that one cannot be a distinctive individual within a group because this would obstruct inclusion

and that one cannot identify with society at large because too much inclusion obstructs individuals' distinctiveness. From this perspective it seems that current trends toward individualism might not only be harmful for solidarity in society, but also for the satisfaction of individuals' need for inclusion.

In sum, although social identity theory, self-categorization theory, and optimal distinctiveness theory all have somewhat different approaches to the processes underpinning social identity, they all appear to converge on the same conclusion: there is a tension between being a distinctive individual and being a highly identified member of a cohesive group. By implication, these theories suggest that individuality and social cohesion are irreconcilable, and that if society continues in its progression towards increasing individualism, we will end up at a situation in which social solidarity is no more. But in this dissertation we question whether this "either/or" perspective is correct.

Challenges for the Traditional Social Identity Approach

Notwithstanding the broad popular appeal of the idea that there would be an incongruence between the independence of the individual and the cohesiveness and solidarity of groups, both in the theories discussed so far and in the social sciences more generally, this simple assumption is challenged by multiple observations of situations in which individuality and group membership are entwined and not (at first glance) incongruent or antagonistic at all. For example, in individualistic cultures, the expression of individuality may be an expression of one's cultural group membership (Jetten, Postmes, & McAuliffe, 2002). Moreover, some groups appear to be founded on principles of individual self-expression and independence. For example, the strength of a multidisciplinary team lies in the differential

background of its members, and the progression of the scientific community is dependent on the extent to which individual scientists make a distinctive contribution. Groups in general, such as friendship groups, families, political parties, and organizations seem to be partly dependent on the input of individual members.

Indeed, researchers both from within the social identity tradition and beyond increasingly seem to recognize that (in many cases) there *can* be a surprising amount of individuality in highly cohesive groups and powerful social categories alike (Postmes & Jetten, 2006). This observation can pose a problem for the traditional social identity approach. If we look at the literature, we can find various perspectives that can create possibilities for individuality within a group and these different solutions challenge the traditional social identity approach to a greater or lesser extent.

The content of group norms. One way of understanding the possibility for individuality within groups can be inferred from SCT itself. According to SCT, when social identity is salient, group members will internalize group norms and conform their behaviour in line with such norms (Turner, 1991; Hogg & Turner, 1987). Therefore, it has been proposed that the possibility for individuality within a group should be dependent on *what* group norms prescribe. For example, expressing individuality is completely in line with conforming to a cultural norm of individualism (Hornsey & Jetten, 2004; Jetten et al., 2002; Jetten, McAuliffe, Hornsey, & Hogg, 2006). Similarly, being critical and thinking independently is completely in line with a group norm of critical and independent thought (Postmes, Spears, & Cihangir, 2001). Finally, accepting group members who are "different" is completely in line with an organizational norm of valuing diversity (Homan, Van Knippenberg, Van

Kleef, & De Dreu, 2007; Luijters, Van der Zee, & Otten, 2008). Reasoning from this self-categorization perspective, the possibility for individuality (and diversity) is thus fully dependent on the norms provided by the group. Individuality should be possible only to the extent that the group prescribes it.

But while the content of group norms can provide a self-categorization explanation for individuality within pre-existing groups, one could wonder how norms for individuality or diversity can emerge from a self-categorization perspective in the first place. In particular, if we consider the principle of meta-contrast, assumed by SCT to underlie psychological group formation, how can a collection of distinctive individuals ever come to perceive themselves as a group, or as prototypical group members? And who would be considered a prototypical group member if the norm prescribes individuality? It seems that these questions cannot easily be answered from within a self-categorization perspective.

Individuality as a cognitive delusion. Another approach that suggests that it is possible for people to feel as an individual while being a group member is the perspective of Prentice and colleagues, who suggest that the subjective experience of agency and autonomy, and the social perceptions of individuality are, to a large extent, misperceptions (e.g., Prentice, 2006; Miller & Prentice, 1994). This perspective is not inconsistent with SCT, we note: To the extent that individuals subjectively experience their identity as a unified whole, the actions motivated by a particular social identity could be experienced as just as agentic and authentically self-chosen as the actions motivated by their personal identity.

This cognitive misattribution of socially motivated behaviour to internal agency and autonomy thus also seems to provide a self-

categorization explanation for individual's being able to feel as a distinctive individual while being a group member. However the assumption that individuality might be nothing but a misattribution, cannot explain that some groups, or maybe to some degree all groups, seem to thrive on the individuality of its members.

The type of group. We can infer another possibility for individuality within groups from the perspective that there are different "types" of groups (Lickel et al., 2000). The extent to which individuality and group membership are opposing depends on the type of group one is referring to. Broadly, a distinction has been made between groups as categories (defined on the basis of similarity or common identity), and groups as dynamic entities (defined on the basis of interaction or common bonds; Deaux & Martin, 2003, Prentice, Miller, & Lightdale, 1994; Wilder & Simon, 1998; see also Brewer, Hong, & Li, 2004). According to Wilder and Simon (1998), categorical group membership depends on the extent to which one is similar to other group members, whereas dynamic group membership depends on the extent to which one fits into the group's structure. These differences seem to suggest that SCT, and its assumed antagonism between individual and group, might better fit with categorical groups than with dynamic groups (see also Moreland, Argote, & Krishnan, 1996). In support of this suggestion, research has shown that the perceived groupiness (entitativity; Campbell, 1958) of dynamic and categorical groups is predicted by different antecedents (Ip, Chiu, & Wan, 2006; Rutchick, Hamilton, & Sack, 2008; Spencer-Rodgers, Hamilton, & Sherman, 2007). While categorical groups are perceived as a group because of perceived homogeneity, dynamical groups are perceived as a group because of perceived interaction and agency. These results suggest that the conflict

between individuality and group membership might be reconciled within dynamic groups.

Although a distinction between categorical groups and dynamic groups can provide an understanding for why individuality sometimes can be possible within groups, the distinction itself might not be that clear-cut. For example, research suggests that people can perceive the same group (i.e. a social caste, a political party, or a group of high school students) as dynamic and categorical, and this perception in turn determines whether similarity or interaction enhances entitativity (Rutchick et al, 2008). Given that all groups (even families) might be seen as categorical to some extent and in particular situations, it might be that self-categorization processes can apply to all groups to some extent (Postmes, Baray, Haslam, Morton, & Swaab, 2006). However, given that all groups might also be seen as dynamic entities, SCT appears to ignore the possibility that large social categories might form more dynamically and the implications this may have for the relation between individual and group.

The relational self. The recognition that relations among individuals might be more important than SCT suggests, is incorporated in another perspective that might also provide opportunities for individuality within a group. Rather than assuming that *groups* can be construed as dynamic, others have suggested that *individuals* can construe themselves in terms of relations (a notion that is also central to identity theory, Burke, 1980; McCall & Simmons, 1978; Stryker, 1968). Brewer, who as mentioned earlier was inspired by the social identity approach, suggested that there might be a level of self-construal "in between" personal identity and social identity. According to this perspective, individuals can, besides defining the self as an individual (personal identity) or as a group member (social

identity), also construe the self in terms of their role in relation to significant others (a relational identity; Brewer & Gardner, 1996; see also Stets & Burke, 2000). To the extent that such a relational identity is salient, individuals' behaviour is expected not to be motivated by self-interests or by more abstract collective welfare but by the benefit for close others. Furthermore, self-evaluations are expected not to derive from interpersonal or intergroup comparisons but from the adeptness with which one performs "interpersonal roles" with significant others. Following this suggestion, when a relational identity is salient, individual distinctiveness might not hamper one's position in a group and could possibly highlight the distinctive role one fulfils in relation to others. This reasoning fits with research showing that a relational identity allows for group cooperation despite within-group differences and without the necessity to categorize in terms of a shared social identity (Brickson, 2000; Vos & Van der Zee, 2011).

Although this research suggests that a relational identity might provide possibilities for individuals to be distinctive within a group, it also seems to affirm the notion that social identity cannot be reconciled with individuality. After all, the suggestion of an intermediate level of identity implies that one can only be distinctive within a group if one does *not* define the self as a distinctive individual or as a group member. Relational identity can thus be considered as a compromise between personal and social identity within the individual, reaffirming the idea that individuality and solidarity exist at two very different and irreconcilable levels of abstraction that can only be reconciled if we ignore them.

Further support for the possibility of defining the self in terms of social roles to reconcile individual distinctiveness with group membership can be found in Bettencourt and Sheldon's work on psychological need

satisfaction (Bettencourt, Molix, Talley, & Sheldon, 2006; Bettencourt & Sheldon, 2001; Sheldon & Bettencourt, 2002). Their research shows that individuals can satisfy both self-oriented and socially-oriented psychological needs through their social role within a group (what they call "social-role identity") as long as the characteristics and skills of an individual corresponds with the expectations and demands of their social role. Thus, in contrast to optimal distinctiveness theory, Bettencourt and Sheldon assume that needs for individuation (or autonomy) and needs for inclusion (or relatedness) are not necessarily opposing (see also self-determination theory; Deci & Ryan, 2000). This suggests that individuals' needs for being a distinctive individual and being a group member might both be met through one's role within a group. However, it should be noted that this social role solution for reconciling being a distinctive individual and being a group member appears rather "mechanical" (see Durkheim, 1893/1984). Although a social-role identity does not assume the process of depersonalization of the self in terms of an ingroup prototype, a particular social role is assumed to be associated with a particular set of expectations and norms (see also Stets & Burke, 2000). This suggests that being distinctive within a group is only possible to the extent that the distinctiveness of an individual fits with the particular social role he or she occupies.

In sum, we can infer from these different perspectives (different group norms, different cognitive interpretations, different types of groups, and different self-construals) that there are various approaches that suggest that the conflict between being a distinctive individual and being a group member could be reconciled. By implication, the increased individualisation of Western societies might not necessarily result in the erosion of groups, communities, and society.

Cultural differences. Our general question of how individuals are related to collectives has also been of central concern in research on cultural differences. Cross-cultural psychologists have distinguished individualistic societies, such as The Netherlands and the United States of America, from more collectivistic societies, such as Indonesia (Hofstede 1980; Triandis, 1995). In collectivistic cultures, such as in most countries in East Asia, collective fate, goals, and values seem to be centralized. Individuals in collectivistic cultures seem to make no distinction between personal and collective goals or, if they do so, subordinate their personal goals to collective goals (Triandis 1989). It appears that in such collectivistic cultures, individuals are conceived as aspects of collectives (Triandis, Chan, Bhawuk, Iwao, & Sinha, 1995).

From a social identity perspective on the difference between individualistic and collectivistic cultures, we could infer that individuals from individualistic cultures might be more likely to self-categorize as independent individuals, whereas individuals from collectivistic cultures might be more likely to self-categorize as group members and to make comparisons on the intergroup level (cf., Triandis, McCusker & Hui, 1990). However, a meta-analysis shows that individuals in collectivistic countries might be *less* group-oriented than individuals within individualistic cultures (Oyserman, Koon, & Kemmelmeier, 2002).

Rather than focusing on a construal of the self as either a distinctive individual *or* group member, other cultural psychologists have focused on the distinction between independent and interdependent self-construals (Markus & Kitayama, 1991). Whereas individuals in individualistic cultures seem more likely to construe the self as an independent, self-contained, and autonomous entity, individuals in collectivistic cultures are more likely to construe the self interdependently, in terms of their relationships to others

(see also Brewer & Gardner, 1996). This seems to suggest that SCT with its assumption that individuals either define themselves in terms of personal or social identity might not be well applicable in more collectivistic cultures, where individuals may be more likely to construe themselves as interdependent of others (see also Yuki, 2003).

Indeed, a recent content analysis of existing scales of collectivism (Brewer & Chen, 2007) shows that within psychological research on cultural differences, collectives are predominantly operationalized as networks of interpersonal relations rather than as ingroups (as would be in line with SCT). This observation, together with the concept of relational identity described earlier, led Brewer and Chen to propose a new theoretical framework that distinguishes relational collectivism from group collectivism (see also Brewer & Roccas, 2001; Brewer & Yuki, 2007). This framework suggests that individualism, and relational versus group collectivism are associated with different self-construals, agency beliefs, and values. Furthermore, these different levels of social orientations are assumed to vary among cultures in the extent to which they are salient and have priority.

Research seems to support the suggestion that collectives in collectivistic cultures are more relational than collectives in individualistic cultures. For example, for individuals in collectivistic cultures, in-group identity appears to be predicted by the knowledge of the relational structure, individual differences, and feelings of personal connectedness with in-group members, rather than by ingroup homogeneity (Yuki, 2003). Furthermore, it seems that individuals in collectivistic cultures achieve their motive for distinctiveness through their distinctive social position *within* a group, rather than from being a distinctive individual *or* a distinctive group (Becker et al., 2012; Vignoles, Chryssochoou, & Breakwell, 2000). Together,

these findings suggest that the framing of individuals and groups in terms of relations rather than in terms of independent individuals or social categories is an important difference between collectivistic and individualistic cultures. It seems that the traditional social identity approach and its assumed antagonism between the individual and the group as a category do not really fit this differential framing of individuals and groups in collectivistic cultures. In collectivistic cultures, the individual and the group seem to be connected through the role the individual fulfils in the broader network of relations.

A superficial interpretation of these cultural differences could lead to the conclusion that by adopting a more "collectivistic" culture in the West, individuality and social solidarity might be reconciled. However, it should be noted that, although the individual and the group might not be antagonistic in collectivistic cultures, the focus on role expectancies and role hierarchies still provides clear expectations of how individuals should act. The possibilities for individual distinctiveness within the group created by such role expectancies do not seem to fit the Western definition of individuality as individuals being autonomous. Although adopting a collectivistic culture thus might not be the solution for reconciling individuality and social solidarity in the West, these cultural differences together with the notion of dynamic groups and relational identities do seem to suggest that intra-group dynamics might be important to bring the two closer together (cf. Kampmeier & Simon, 2001, for a cognitive solution).

All in all, these different lines of research within both social and cultural psychology suggest that SCT cannot explain the complete story behind group formation: Sometimes the display of individuality within the group is possible and sometimes it even becomes a prominent feature of

society which appears to strengthen (rather than undermine) solidarity. The social identity tradition was developed against the, at the time, predominant assumption that all group processes (including intergroup phenomena such as ingroup favouritism and discrimination) could be fully explained as self-interested instrumental and rational behaviour in networks of interdependent interpersonal relations (e.g., as argued by Rabbie, Schot & Visser, 1989). However, it seems that by claiming that interpersonal dynamics are unnecessary or insufficient for the process of (psychological) group formation (Turner, 1982, 1984), social identity researchers might have thrown the baby out with the bath water: Intra-group dynamics and interdependence between group members do seem to play a role.

An Interactive Model of Identity Formation

While self-categorization processes of psychological group formation seem to suggest an antagonism between being a distinctive individual and being a group member, it seems that there are more dynamic groups in which individuals' distinctiveness does not necessarily hamper group membership. The idea that groups might be formed through *both* categorical and dynamic processes, and that individuality and group membership do not need to be in opposition, has recently received attention in the interactive model of identity formation (IMIF; Postmes, Haslam, & Swaab, 2005a). This model aims to explain individuality and social influence in small groups by distinguishing deductive (categorical) processes of social identity formation from inductive (dynamic) processes of social identity formation.

In the IMIF, *deductive* processes of social identity formation refer to the categorical processes proposed by SCT to underlie psychological group formation. That is, in small groups, group members are assumed to deduce

a shared social identity from the wider context through intergroup comparison on the basis of what group members have in common at a superordinate group or category level that differentiates them from other groups. In contrast, the *inductive* processes of social identity formation refer to the more dynamic processes through which individuals might contribute to the formation of a shared small-group identity (Postmes et al., 2005a). From this perspective, who "we" are, is assumed to be not only determined by what makes "us" different from "them" but also by the individual members within the group (cf. Gaertner, Iuzzini, Witt, & Oriña, 2006). Here, intragroup interactions are assumed to inform the content of social identity, and group norms and conventions are expected to be induced from the expressions and behaviours of individuals within the group (Swaab, Postmes, Van Beest, & Spears, 2007).

According to the IMIF, these inductive processes allow for individuality (or individual distinctiveness) to form the basis for the inference of social identity. This reasoning builds on Durkheim's (1893/1984) notion of organic solidarity arising out of the differentiation between individuals within a group, and seems to imply that the more distinctive individuals are, the stronger the social identity that might inductively be formed. Thus, rather than the antagonism between individuality and social identity suggested through deductive processes, through inductive processes of social identity formation individuality might become an enforcer of social identity. This suggests that the inductive formation of social identity allows for reconciliation between the individual and the group.

It should be noted that the inductive processes in the IMIF seem to provide an alternative possibility for reconciling individuality and group membership than described so far. First, beyond the suggestion that group

norms may prescribe individuality (Jetten et al., 2002), induction refers to a process through which individuals make an active contribution to the *emergence* of a shared identity (and accompanying social norms) in a context where no prior norms or expectations about individuality exist (individualistic group norms might, however, be a *consequence* of induction). Second, rather than creating a possibility to *cognitively (or internally)* reconcile individuality with social identity, induction also creates a possibility to externally reconcile individuality with *shared* social identity of group members. Third, rather than proposing a discontinuity between categorical and dynamic groups in the degree to which these inductive processes play a role, the IMIF suggests that both categorical (deductive) and dynamic (inductive) processes can play a role in all social groups. Indeed, Postmes et al. (2006) pointed out that small groups may operate as social categories, and that small-group dynamics can give rise to social identity. Fourth, different from the proposal that individuals can construe the self in terms of relational identity (in between personal and social identity); induction seems to suggest that group members can develop a shared social identity that incorporates the dynamics between personal identities or different individuals within the group. Thus, through inductive processes of social identity formation personal identity and social identity are assumed to go together. Finally, rather than social roles prescribing how individuals are expected to be distinctive, inductive processes of social identity formation suggest that pre-existing differences can be integrated in new social identities.

Open questions in IMIF. The IMIF was proposed as a model for better understanding deductive and inductive processes of social influence in dynamic small groups but it also provides an interesting new perspective on the relation between the individual and the group. To the extent that the model can apply to all sorts of groups (ranging from small dynamic groups to large social categories), inductive processes might create opportunities for reconciling today's increasing individualization with social solidarity. This would, in Durkheim's words, suggest that solidarity can organically arise out of the differentiation of individuals, and that individuality and social identity do not need to be antagonistic.

But it has to be said that up to now, we are unable to conclude whether these theoretical proposals have any validity. So far, the IMIF has received only minimal empirical testing. Since the model was proposed in 2005, three papers (Brooke, Postmes, Jetten, & Dyson, 2009; Postmes, Spears, Lee, & Novak, 2005b; Swaab, Postmes, & Spears, 2008) have explicitly compared inductive and deductive processes of social identity formation. Both empirically and theoretically, there are a number of unanswered questions and issues to resolve.

First, and most important to this dissertation, it remains unclear from the IMIF how individual distinctiveness and social identity formation are related. While reasoning from Durkheim's idea of organic solidarity that individual differences might strengthen the process of inductive social identity formation, Postmes et al. (2005b) state that, "It is important to stress that this does not necessarily mean that the formation of an inductive identity depends on the existence of dissimilarity within the group" (p. 749). But for the question of whether individuality can be reconciled with group membership, research should examine whether groups in which members

are perceived to be different from each other can form a strong shared identity through inductive processes.

A second issue is that the previously used manipulations of the *process* of inductive social identity formation are according to us suboptimal. Postmes et al. (2005b) manipulated induction in two ways that were originally intended as a manipulation of "common bond group" (see Postmes & Spears, 2000). In a first study, induction was manipulated as "personal bond groups" in which members have a mutual bond. Participants were told that they were put in a group with people who could well have been close personal friends. In a second study, induction was manipulated by letting groups carry out activities that are fun and caring and that accentuate interpersonal relations. Furthermore, Swaab et al. (2008) manipulated induction by letting group members in dyads disclose themselves to each other. Thus, in both these papers, the process of induction was manipulated by focusing on interpersonal relations. We believe that these manipulations do not optimally fit the theoretical operationalization of induction as the process through which individual group members contribute to the formation of social identity and do not clearly disentangle the process of inductive social identity formation from relational identity salience. The manipulations of induction used in Brooke et al.'s (2009) unpublished work do a better job in this regard. In a first study, induction was manipulated by telling experimental groups that "groups typically had above average shared identity and above average individuality". Furthermore in a second study, induction was manipulated by asking groups of athletes to write about a video of the *similarities and differences* within their set in terms of athletic performance. Although these manipulations are clearly different from manipulating relational identity salience, they still not optimally fit the theoretical operationalization of

induction. In addition, these manipulations may be confounded with a manipulation of perceived group diversity.

Third, as mentioned above, the IMIF was proposed to be a model for understanding social identity processes in small groups. No research has yet examined the extent to which inductive processes might also play a role in social identity formation in larger groups and social categories. Therefore, it remains an empirical question whether inductive processes of social identity formation can create opportunities for reconciling individuality and group membership in larger groups.

A final issue concerns the question of what happens once social identity is formed. Postmes et al., (2005a) suggest that once social identity is established, either through deductive or inductive processes, "group members will be influenced to behave in a way that is consistent with the content of this identity and with group norms" (p. 10). However, given that individual differences may be integrated in social identity through an inductive process, it might well be that inductively formed social identities leave more room for individuality than deductively formed social identities. No research has yet examined whether deductively and inductively formed social identities might have different consequences.

The interplay between individuality and social identity. In this dissertation, we will empirically explore the possibility of inductive processes in social identity formation and the implications this can have for the reconciliation between individuality and group membership. To do this, we will focus on several areas where we assume deductive and inductive processes to have distinct effects.

First, whereas deductive processes suggest that perceiving oneself as similar to other group members can be an underlying mechanism for

deductive processes resulting in social identity, individual distinctiveness might be an underlying mechanism for inductive processes resulting in social identity. Second, whereas deductive processes suggest that heterogeneity of group members hampers the formation of a strong shared social identity; through inductive processes groups perceived to be heterogeneous may be able to form a strong shared social identity. Third, whereas deductive processes of social identity formation suggests that once social identity is formed, group members should depersonalize themselves in terms of shared group characteristics and behave in line with group norms, social identities that are inductively formed might leave more room for expressing individuality in ways that could be considered as deviant to group norms. Finally, whereas deductive processes of social identity formation suggest that intragroup dynamics are unnecessary or corrosive for shared social identity formation, inductive processes suggest a more important role for intragroup dynamics for the formation of shared social identity.

Together, these differential hypotheses suggest that deductive processes of social identity formation alone might provide a too simplistic view on the relation between individual and group. To the extent that inductive processes can play a role in the formation of social identity in all groups, individuality and social identity might be mutually reinforcing. Taking both processes into account can therefore greatly enhance the ability of social identity to explain individuality and group functioning, and provides a more balanced perspective on the interplay between individual and group in modern Western society.

Overview of Empirical Chapters

In four empirical chapters[3], we aim to demonstrate that the induction of a shared social identity is possible, and to examine how induction differs from deduction.

Chapter 2

In Chapter 2, we explore to what extent inductive processes of social identity are perceived to exist in all groups (small interactive groups and large social categories alike), and to what extent perceived individual distinctiveness might be an underlying mechanism for inductive processes resulting in social identity. In particular, we test a model predicting that to the extent a group is perceived as inductively formed, individuals may perceive themselves as more distinctive, which will foster perceived "groupiness" (or entitativity), and in turn will enhance identification. Three survey studies test this model against alternative theoretical models in different group contexts. Study 2.1 focuses on self-relevant groups ranging from 4 to 15 members. Study 2.2 focuses on a much broader set of groups. We asked participants to think of different 'types' of groups in Lickel's (e.g. Lickel et al., 2000) taxonomy. Finally, in Study 2.3 we test causality by using group size as an extraneous indicator of inductive social identity formation.

Chapter 2 provides a first empirical test of how inductive social identity formation may differ from deductive social identity formation. It provides insight in the usefulness of considering inductive processes of social identity formation over a broad range of groups and the extent to

[3] The empirical chapters of this dissertation (Chapters 2 to 5) were written as separate journal articles. As a result, these chapters may have some overlap with the introduction and with each other.

which it allows individual group members to internally reconcile their distinctiveness with group membership.

Chapter 3

Because Chapter 2 was based on results from survey research, this was concerned with individual *perceptions* of the relation between individual distinctiveness and group membership. This rather ignores the processes by which the individuality of oneself and of others is (or is not) reconciled within an actual group in which those others are just as present as the self. In other words, it does not allow for any conclusions about a possible reconciliation of individuality and *shared* social identity of group members in settings in which those others are not some abstraction but a material reality.

To overcome this, Chapter 3 explores whether members of small groups can inductively form a shared identity, and whether groups perceived to be heterogeneous may be able to form a stronger social identity through an inductive process than through a deductive process. Two studies test this experimentally. In Study 3.1, we manipulate the process of social identity formation (deductive vs. inductive) in experimentally created groups, and measure group members' identification and perceived entitativity, as indicators of social identity. Study 3.2 tests the prediction that these different processes of social identity formation can provide different outcomes of perceived group diversity. To this end, in addition to the process of social identity formation, perceived diversity is also manipulated (homogenous vs. heterogeneous), and group cooperation is measured as an additional indicator of shared identity.

Chapter 3 thus provides insight in the extent to which individuality and group membership can be reconciled in actual collaborations (i.e., not

just cognitively, but interactively) by inducing a shared social identity where one did not exist before. The results dovetail with Chapter 2 in suggesting that individuality can be an antecedent of social identity through inductive processes.

Chapter 4

The results of chapters 2 and 3 do not preclude the possibility that individuality might *also* be an outcome of inductive social identity formation: in inductive social identity groups, individuality and social identity might be mutually reinforcing. Indeed, Chapter 4 explores the idea that in contrast to deductively formed social identities, inductively formed social identities leave more room for expressing individuality in ways that could be considered as "deviant" to group norms. Building on Chapter 3, two studies of bogus small groups manipulated social identity formation and diversity, and established a group norm about a particular issue. Participants are asked to generate arguments concerning an issue that they will discuss with the other group members. The degree to which the ideas generated are norm-consistent or norm-inconsistent is our index for the degree of individuality displayed. The two studies differ in the issue participants are asked to generate arguments about (Studies 4.1 and 4.2).

Chapter 5

Together, Chapters 2, 3, and 4 use a novel perspective on social identity formation to more closely examine the interplay between individuality and group membership. The studies provide insight in the differential relationship between individuality and social identity that is the consequence of deductive and inductive processes of social identity formation. But while all these studies are based on the assumption that in

those inductive processes, intragroup dynamics play an important part, Chapter 2-4 do not in themselves examine the extent to which intragroup interaction is *necessary* for shared psychological group formation.

Chapter 5 therefore takes another approach to the importance of understanding both deductive and inductive processes of social identity formation, by exploring the extent to which intragroup interaction (group-doing) is necessary for the emergence of shared social identity. In this, we distinguish between a self-definition dimension of identification (referring to the extent to which individuals perceive themselves and other in-group members as a category) and a self-investment dimension of identification (referring to individuals' psychological investment in the in-group, see Leach et al., 2008). By comparing three small group studies that varied in the possibility for intragroup interaction, we test the necessity of intragroup processes for the emergence of shared identification on these two dimensions. A multi-level approach explores to what extent intragroup interaction is necessary for shared self-definition and shared self-investment to emerge.

Chapter 2

PERCEIVING INDIVIDUAL DISTINCTIVENESS AND SOCIAL IDENTITY FORMATION [4]

[4] Chapter 2 is based on: Jans, L., Postmes, T., & Van der Zee, K. I. (2011). The induction of shared identity: The positive role of individual distinctiveness for groups. *Personality and Social Psychology Bulletin, 37,* 1130-1141. doi:10.1177/0146167211407342.

It is often taken for granted that those who stand out do not fit in. This is partly because many groups are founded on *commonalities* among group members and partly because groups pressurize members to conform and fall in line. However, in order to belong to a group, individuals do not always have to disguise that which makes them unique. For example in individualistic cultures, showing one's individuality can be a form of cultural conformity (Jetten, Postmes, & McAuliffe, 2002). Moreover, displays of individuality can sometimes initiate the formation of (new) social groups. One extreme example of this is that the success of artistic groups depends on the degree to which members are idiosyncratic, deviant, and original. But more mundane groups, such as friendship groups, families, political parties, organizations, and many other groups, also tend to be dependent on the input of individual members. In this paper, we argue that if groups are formed by the contributions of individuals (that is, when social identities are formed inductively), they allow group members to feel more distinctive. These feelings of individual distinctiveness may in turn strengthen the degree to which members view the group as an entity and become identified with this group. We tested this prediction in a broad spectrum of social groups.

Homogeneity and Groupiness

For a long time, it has been emphasized that similarity and homogeneity are the hallmarks of groups. In the entitativity literature, similarity is seen as one of the predictors of whether people perceive groupiness (Campbell, 1958). Also in conceptualizations of social identification, perceiving the group as homogeneous and perceiving oneself as a prototypical group member are seen as key attributes of group identification (Leach et al., 2008). Moreover, a sense of belongingness to some extent suppresses a sense of distinctiveness within a group (Brewer, 1991; Codol, 1975).

However, research suggests that the existence of within-group differences does not necessarily obstruct the sense of cohesion and unity that group members may feel. For example, norms and other group characteristics may determine the extent to which individuality or diversity is tolerated within the group (Hornsey & Jetten, 2004; Jetten, McAuliffe, Hornsey, & Hogg, 2006; Rink & Ellemers, 2007). In a related way, it has been argued that the lens through which one looks at a group determines whether similarity is a key characteristic of groupiness (Brewer, Hong, & Li, 2004; Crump, Hamilton, Sherman, Lickel, & Thakkar, 2010; Hamilton, Sherman, & Spencer-Rodgers, 2004; Rutchick, Hamilton, & Sack, 2008). On the one hand, groups can be perceived as such because their members share certain properties. Here, static similarity is the source of groupiness. Alternatively, one can see a group as an agentic and dynamic agent in which individuals are interdependent in the pursuit of common goals. In the latter perspective, similarity of group members is not required in order to perceive the group as an entity. Thus, characteristics of the group and the way one perceives it determine whether differences are seen as obstructions for group cohesion and unity.

In this paper, we take this reasoning a step further by arguing that feeling individually distinctive can also help individuals to perceive their group as an entity with which they identify. Instead of focusing on the group as a given entity, in which differences are either a problem or not, we focus on the *process* of forming a group identity. More specifically, we focus on the influence individuals have on the (trans) formation of a group identity (Postmes & Jetten, 2006). We argue that in those cases where contributions of individual group members have a strong influence in defining the group's direction, group members are likely to perceive themselves as more distinctive. Indeed, this distinctiveness broadens the basis upon which the group is founded and thus should help them to perceive the group as an entity, which may elicit their identification as group members.

The Bottom-up Induction of Shared Identities

Traditionally, social identity formation is seen as a top-down process in which a social identity is deduced from commonalities at a superordinate group or category level. In that case, a social identity and a personal identity can easily become opposing forces because members are to some extent depersonalized due to the highlighting of commonalities (Turner, 1982). In other words, when social identities are deduced from shared group attributes, within-group differences are suppressed. However, more recently it has been argued that social identities can also be induced from individual qualities within the group (Postmes, Haslam, & Swaab, 2005a; cf. Turner, 1982), for example because of the organic emergence of a sense of solidarity (cf. Durkheim, 1984). Here, intragroup interactions inform the content of social identity, and group norms and conventions are inferred from individual expressions within the group. This process may

also occur when subgroups influence the formation of superordinate identities, as suggested by the ASPIRe model (Haslam, Eggins, & Reynolds, 2003).

Although deductive and inductive processes can both play a role in the (trans) formation of a social identity, in this paper we specifically focus on this less-studied inductive route. We address the question of how, via this inductive route, individual distinctiveness can help individuals to perceive themselves as a group with which they identify.

When social identities are formed inductively, the actions of individuals are the impetus for the experience of unity and the inference of social identity contents. Prior research has suggested that identification with a more inductively formed group can be as high as identification with a more deductively formed group (Postmes, Spears, Lee, & Novak, 2005b; Swaab, Postmes, & Spears, 2008). However, in order to achieve social *identification* with an inductively formed group, there first needs to be a perception that the aggregate of distinct individuals within it forms a social *entity*. Hence, the more this group is perceived as an entity, the more strongly its group members can begin to identify with it (cf. Castano, 2004). How then does an aggregate of individuals come to perceive itself as a group through an inductive route?

The perception that a set of people form a meaningful entity is referred to as entitativity (Campbell 1958). It has been argued and shown that similarity is not the only prerequisite for groups to have entitativity (Brewer et al., 2004; Crump et al., 2010; Hamilton et al., 2004; Ip, Chiu, & Wan, 2006; Rutchick et al., 2008). Entitativity may also be reached via interaction, common goals, or common outcomes (Gaertner, Iuzzini, Witt, & Oriña, 2006; Lickel et al., 2000; also Campbell, 1958).

Integrating earlier work on induction of social identities with work on entitativity, the present research tests the prediction that feelings of individual distinctiveness could mediate the relation between inductive social identity formation and entitativity (Figure 2.1). In an inductive process, groups are influenced by group members' contributions as individuals. In such cases, a greater diversity of contributions would strengthen the group as a whole, as long as the diversity of inputs does not create conflicts within the group. Therefore, instead of disguising that which makes an individual unique, the inductive route of social identity formation requires that individuals actually highlight their distinctiveness in order to make a contribution to the group as a whole.

There are several reasons why individual distinctiveness can enhance entitativity. In small groups, diversity strengthens the group's capacity if a group can benefit from a broader spectrum of individual contributions in the fulfilment of particular tasks (cf. Swann, Polzer, Seyle, & Ko, 2004). Moreover, it is likely that group members may consider the collective to be more strong and adaptive to the extent that it is responsive to individuals' input and desires for change. As suggested by the ASPIRe model (Haslam et al., 2003), giving group members voice and enabling them to establish a distinct position in the group can help them feel acknowledged and appreciated in their own identity. Such processes may also operate in larger collectives. This may be illustrated with an example. In groups where deductive processes play a large role, such as the military, individual distinctiveness is discouraged and similarities are the foundation of perceived unity. In such groups, diversity undermines the unity of action. In groups where inductive processes play a larger role, such as the science community, individual distinctiveness is encouraged: here the greater experience of independence and freedom is testament to the efficacy of the

community. The experience of individual distinctiveness can thereby strengthen the awareness of the unity of the group. Therefore, we expect that through an inductive process individuals become aware of their distinctiveness and this awareness of being distinctive helps one perceive the group more as an entity, and not less. This perception of entitativity in turn is what makes it possible for group members to begin identifying with the group.

Research Overview

In three studies, we surveyed a wide range of different pre-existing social groups, using different methods of eliciting them from (or presenting them to) participants. We tested the model depicted in Figure 2.1 and compared this model with alternative hypotheses. This model can be inferred from prior research, which has gathered some evidence for an inductive path to social identity formation in newly formed small interactive groups in an experimental setting. The approach of the present studies would help us to chart the underlying processes in inductive social identity (trans) formation in more detail and across a much broader spectrum of groups than has hitherto been considered. One key alternative model to test is based on the prediction that feeling individually distinctive is an outcome of group entitativity and identification, rather than a mediator (e.g., Jetten et al., 2002).

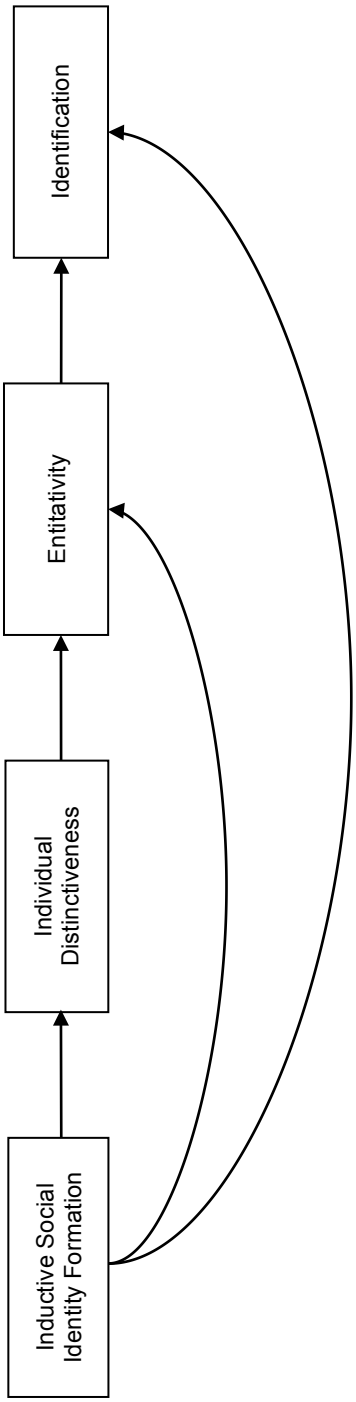

Figure 2.1. Theoretical model of inductive social identity formation, individual distinctiveness, entitativity, and identification.

Predictions are tested in different contexts. Study 2.1 focuses on self-relevant groups ranging from 4 to 15 members that were named by participants. We measured the extent to which inductive processes influenced the group, the extent to which individuals felt distinctive within these groups, perceived these groups as an entity, and identified with these groups. In a second study, we aimed to replicate this model with a much broader set of groups. We asked participants to think of different categories of groups, using Lickel et al.'s (2000) taxonomy of group types. We tested whether, across different group types, our model could also be confirmed. Finally in Study 2.3, we demonstrate causality by using group size as an extraneous indicator of inductive social identity formation, testing the same theoretical model.

Pilot

To our best knowledge, no prior research has developed scales to measure how groups are formed and transformed. We therefore designed an index of inductive social identity formation and conducted a pilot to assess the new scale's psychometric properties and divergent validity. Divergent validity was assessed by comparing the new index of inductive social identity formation with a self-verification scale. Certain outcomes of self-verification are similar to the outcomes of inductive social identity formation: Self-verification (the extent to which the experiences of individuals in groups confirm their self-views) has been shown to be related to identification (e.g., Swann, Milton, & Polzer, 2000) and has been proposed to help groups find value in diversity (Swann et al., 2004). Although the two constructs may have similar consequences, they are theoretically distinct. Self-verification is something that groups do for

individuals, but inductive social identity formation concerns the influence and contribution of individuals to the group. We tested the prediction that items from both scales would load on to two different factors in newly formed small groups.

Method, Results, and Discussion

First year students (107 women, 17 men, 1 unknown, M_{age} = 19.19) participated in exchange for course credits. They were randomly allocated to groups of five in an online forum, where they chatted about their first experiences at University. After a week, participants filled in a 4-item index of inductive social identity formation (M = 4.74, SD = 0.73). In line with the definition of inductive social identity formation, items assessed the influence of individual members (or subgroups) on the (trans) formation of the group: "This group's identity is formed by members themselves", "Members (subgroups) of this group can steer the course of this group", "Members (subgroups) of this group determine the direction of the group themselves", and "In this group there can be discussion about the group's identity". Self-verification was assessed with the 3-item scale developed by Wiesenfeld, Swann, Brockner, and Bartel (2007; α = .67, M = 3.83, SD = 0.77). An example item is: "This group sees me as I see myself". All items were answered on 7-point scales (1 = *fully disagree*, 7 = *fully agree*).

A confirmatory factor analysis (in EQS 6.1) tested the proposed two-factor measurement model. The model had each set of items load on to one latent variable and allowed covariations between latent variables but not between any errors. The latent variables were weakly correlated (r = .10). Items loaded on the expected latent variable, and the model yielded good fit: $\chi^2(13) = 11.74$, p = .671, CFI = 1.00, RMSEA < .001. The fit of the one-factor model was significantly poorer, $\chi^2(14) = 71.73$, p < .001, CFI

= 0.66, RMSEA = .183. The scale reliability of the index of inductive social identity formation was sound (α = .72), with all item-total correlations > .32. We conclude that the psychometric properties of the index of inductive social identity formation are sound and that there is support for its divergent validity.

Study 2.1

Study 2.1 focused on self-relevant groups ranging from 4 to 15 members. In order to ensure self-relevance, we asked participants to name groups they were affiliated with. We measured the extent to which group identities were induced, the extent to which individuals felt distinctive within these groups, perceived these groups as an entity, and identified with these groups.

Method

Participants. First year students (89 women and 25 men, M_{age} = 20) participated in the study in exchange for course credits.

Procedure. Participants named and shortly described five groups (between 4 and 15 members) of which they were a member. For each of these groups they completed the index of inductive social identity formation. To guarantee a large spread on the index, the computer subsequently selected the group that had either the highest or lowest score. About this group participants then answered a series of questions on individual distinctiveness, entitativity, and identification on 7-point scales (1 = *fully disagree*, 7 = *fully agree,* unless otherwise specified). The correlations between all variables are depicted in Table 2.1.

Table 2.1. Correlations between the main variables in Study 2.1

	Measure	1	2	3	4	5	6	7
1.	Inductive Social Identity Formation	-						
2.	Individual Distinctiveness	.34**	-					
3.	Entitativity	.47**	.35**	-				
4.	Identification	.57**	.35**	.72**	-			
5.	Age	-.16	-.20*	.06	-.02	-		
6.	Sex	.05	.00	.05	.07	-.07	-	
7.	Group Size	-.34**	-.10	-.17	-.25**	.04	-.12	-

Note. * $p < .05$, two-tailed. ** $p < .01$, two-tailed.

Instruments. The *index of inductive social identity formation* measured the influence of individual members on the group identity ($\alpha = .89$, $M = 4.84$, $SD = 1.48$). *Individual distinctiveness* was measured with the item, "To what extent do you feel unique in this group?" (1 = *not at all*, 7 = *completely,* $M = 5.45$, $SD = 1.25$). *Entitativity* was measured with four items (Brooke, Postmes, Jetten, & Dyson, 2009). An example item is: "Members of this group are as one" ($\alpha = .90$, $M = 4.90$, $SD = 1.36$).

Finally, *identification* was measured with the identification scale by Leach et al. (2008). This scale distinguishes between more organic aspects of identity (the self-investment dimension) and more mechanical aspects of identity (the self-definition dimension). In line with this paper's interest in the more organic process of inductive social identity formation, we used items from the self-investment dimension only, e.g., "I feel a bond with this group", "It is pleasant to be in this group", and "I often think about the fact that I am a member of this group" (10 items, $\alpha = .96$, $M = 5.01$, $SD = 1.36$).

Results

The groups that were most often mentioned were workgroups, friends, sport teams, and family. Of these, especially groups of friends scored high on the index of inductive social identity formation. Workgroups generally scored low on the index of inductive social identity formation.

Inductive social identity formation was expected to be related to entitativity via individual distinctiveness. We tested our prediction with a series of multiple regression analyses. In all analyses, we controlled for group size, gender, and age. As expected, inductive social identity formation strongly predicted individual distinctiveness, $\beta = .32$, $t(109) = 3.35$, $p < .001$, and entitativity, $\beta = .49$, $t(109) = 5.43$, $p < .001$. The more the group was seen as influenced by inductive processes, the more participants felt distinctive within the group, and perceived their group as an entity.

As a second step, individual distinctiveness was added to inductive social identity formation as predictor of entitativity. In line with our hypothesis, individual distinctiveness positively predicted entitativity, $\beta = .25$, $t(108) = 2.83$, $p = .006$. The effect of inductive social identity formation decreased, $\beta = .41$, $t(108) = 4.47$, $p < .001$. We tested for mediation by running a bootstrapping analysis (Preacher & Hayes, 2008). Results showed that the indirect effect was significant (bias corrected and accelerated confidence interval .02, .17). The model explained 29% of the variance in entitativity. These results support our hypothesis that inductive social identity formation is related to a feeling of entitativity and that this effect is partially mediated by individual distinctiveness.

In a final step, we used EQS 6.1 to test if inductive social identity formation was related to entitativity via individual distinctiveness and if inductive social identity formation was related to identification via

entitativity, again controlling for group size, gender, and age (see Figure 2.2). Parameters were estimated using a maximum likelihood method. The model yielded good fit, $\chi^2(1) = .58$, $p = .444$, CFI = 1.00, RMSEA < .001 (see Kline, 1998). Wald and LaGrange Multiplier tests suggested that no paths could be added or removed to improve model fit. All parameters were significantly different from zero. Alternative models, including one in which individual distinctiveness was predicted by identification and entitativity, showed worse fit[5]. This provides evidence for the idea that individuality within a group can result in a strong sense of unity partly because individuals within the group feel distinctive. Moreover, feeling distinctive within a group can also indirectly result in identification.

[5] In order not to disrupt the flow of the paper, additional analyses are described in the footnotes. All alternative models tested, fitted the data less well. One model tested the prediction that individual distinctiveness is the consequence of feeling part of a group that promotes individualism and diversity (Jetten et al., 2002). In this model, inductive social identity formation predicts individual distinctiveness via entitativity and identification (also controlling for group size, gender, and age). Model fit was poorer than our theoretical model, $\chi^2(1) = 2.10$, $p = .147$, CFI = .99, RMSEA =.099. This poorer model fit also suggests that feelings of individual distinctiveness do not merely arise as a function of a contrast between the individual and the more entitative groups (e.g., it does not appear to be the case that the more entitative the group was perceived, the more distinctive the individual member feels). Alternative model 2 tested the prediction that identification would predict entitativity rather than the other way around as in our theoretical model (cf. McGarty, 2002). This model also fitted the data less well, $\chi^2(1) = 3.14$, $p = .077$, CFI = .99, RMSEA =.138.

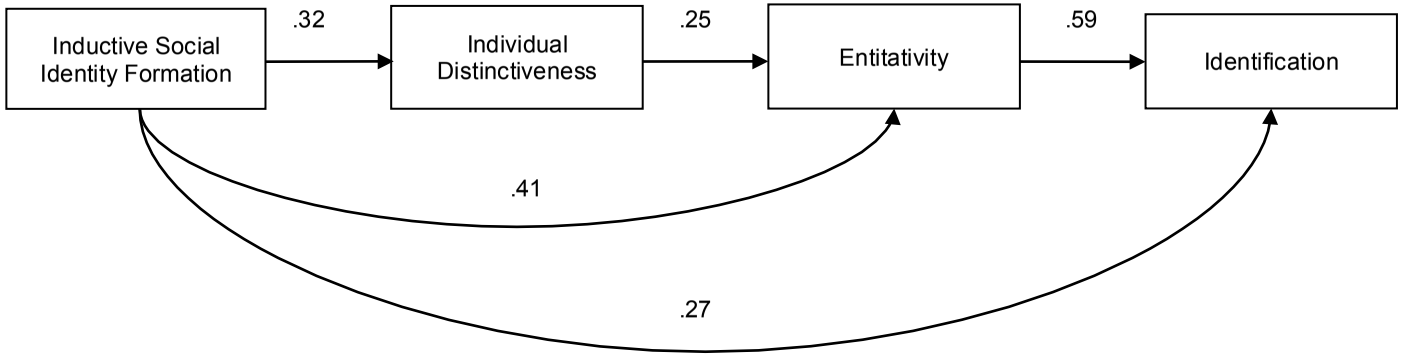

Figure 2.2. Structural equation model of inductive social identity formation, individual distinctiveness, entitativity, and identification in Study 2.1.

Discussion

The results support our predictions. Inductive social identity formation was partly related to entitativity via individual distinctiveness, which in turn influenced identification. When participants had the feeling that individual members could influence the group's identity, they themselves felt more distinctive within the group. Moreover, their perceived distinctiveness helped them to perceive the group as an entity, which in turn helped them to identify with the group. Inductive processes of social identity formation seemed be lowest in groups that were directed from above, such as work groups or committees.

Our analyses indicate that inductive social identity formation also directly influenced entitativity and identification. This pattern of partial mediation makes theoretical sense: distinctiveness is one aspect of why inductive social identity formation can lead to a sense of entitativity and identification. Processes of interaction and interdependence (Gaertner et al., 2006, Lickel et al., 2000; also Campbell, 1958) may all play a role here. Nevertheless, the results also show that within this package of factors, a sense of individual distinctiveness is not harmful to producing a sense of group unity but can actually help inductive social identity formation. These results therefore support the idea that the experience of distinctive individuality is an important aspect of the formation of a social identity through an inductive route.

The theoretical model was compared with alternative models that could explain the correlations. One model we tested was that feeling distinctive might be an outcome of feeling part of a group in which individuality is the norm (see Jetten et al., 2002). The alternative models yielded worse fit than the predicted model. Thus, although this was a cross-sectional study, which limits the ability to draw causal inferences, we find

the predicted relation between individual distinctiveness, entitativity and identification. This implies that in small groups at least, distinctiveness does not impede the emergence of a sense of unity but may contribute to it.

A question remains whether this process can also operate in a larger variety of group types than in the small groups (such as family and friends) studied here. To examine this was the prime purpose of Study 2.2. Furthermore in Study 2.1 groups were self-selected; Study 2.2 asked questions about specific groups selected to cover a broad range of social identities. Finally, the first study used a single item to measure individual distinctiveness. Study 2.2 used a multiple item scale.

Study 2.2

In our second study, we sought to support the model with a much broader set of groups, including large groups and abstract social categories. We thus selected different categories of groups for participants to reflect on, choosing different relevant examples from Lickel et al.'s (2000) distinction between intimacy groups, task groups, social categories, and loose associations. Participants thus thought about their family and relatives (intimacy), a workgroup (task group), psychology students, students, the Dutch, or their gender group (all social categories) and their neighbours (loose associations). We measured the extent to which group identities were perceived to be induced, the extent to which individuals felt distinctive within these groups, perceived these groups as an entity, and identified with these groups.

Method

Participants and design. First year students (173 women and 43 men) participated in the study in exchange for course credits. They answered questions about a specific group. This group varied between-subjects: Family (N = 27), relatives (N = 20), workgroup (N = 23), neighbours (N = 23), Psychology students (N = 39), students (N = 21), the Dutch (N = 33) or gender (N = 29). One participant was deleted because there was no variance in her answers.

Instruments. Scales were identical to Study 2.1 unless noted (Table 2.2). Individual distinctiveness was measured with the item used in Study 2.1 and two additional items "To what extent do you think you are unique in comparison to the other group members?", and "To what extent are you different enough from the other group members?" (3 items; α = .83, M = 5.00, SD = 1.05).

Table 2.2. Descriptive statistics of the main variables and their correlations in Study 2.2

	Measure	Min.	Max.	*M*	*SD*	α	1	2	3	4
1.	Inductive Social Identity Formation	2.00	7.00	4.89	0.88	.70	-			
2.	Individual Distinctiveness	1.00	7.00	5.00	1.05	.83	.40**	-		
3.	Entitativity	1.00	7.00	4.15	1.25	.87	.35**	.28**	-	
4.	Identification	1.00	7.00	4.59	1.22	.94	.40**	.23**	.66**	-

Note. * p < .05, two-tailed. ** p < .01, two-tailed.

Results

Inductive social identity formation was expected to be related to entitativity via individual distinctiveness. We tested our predictions with a series of multiple regression analyses. As expected, inductive social identity formation positively predicted individual distinctiveness, $\beta = .40$, $t(213) = 6.35$, $p < .001$, and entitativity, $\beta = .35$, $t(213) = 5.43$, $p < .001$. In the next step, both predictors of entitativity were included in the model. As predicted, individual distinctiveness was positively related to entitativity, $\beta = .16$, $t(212) = 2.37$, $p = .018$, and the positive effect of inductive social identity formation on entitativity decreased, $\beta = .28$, $t(212) = 4.08$, $p < .001$.

We ran bootstrapping analyses (Preacher & Hayes, 2008) to test mediation of individual distinctiveness in the link between inductive social identity formation and entitativity. Results showed that the indirect effect was significant (bias corrected and accelerated confidence interval .02, .19). The model explained 14% of the variance in entitativity.

In line with Lickel et al. (2000), entitativity differed across types of groups, $F(7, 207) = 5.61$, $p < .001$. Entitativity was relatively high in intimacy groups (family and relatives). It was low in the work group, the loose association of neighbours, and most of the other social categories. Adding group type as predictor explained an extra 12%, $F_{change}(7, 205) = 4.98$, $p < .001$. However, this did not remove the effects of inductive social identity formation and individual distinctiveness. This result supports our hypothesis that inductive social identity formation is related to a feeling of entitativity via individual distinctiveness, and this effect appears to be independent of group type.

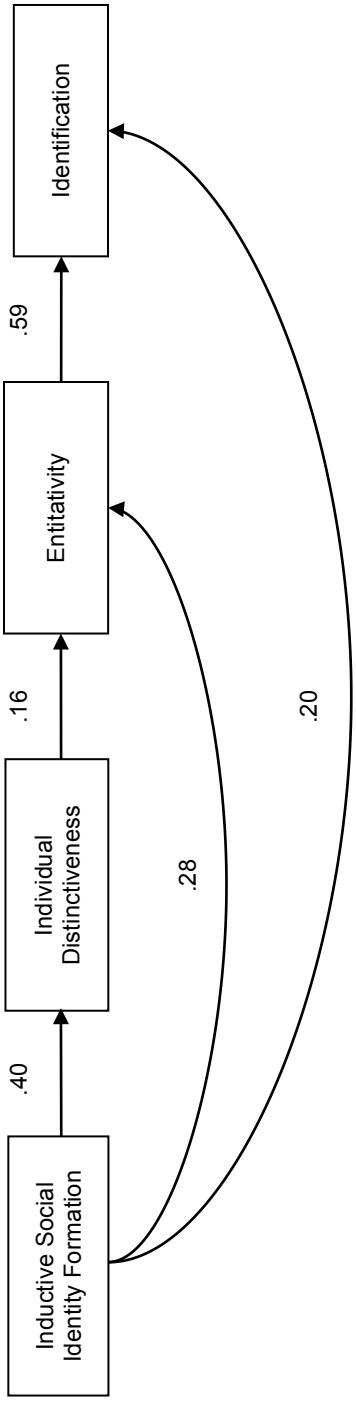

Figure 2.3. Structural equation model of inductive social identity formation, individual distinctiveness, entitativity, and identification in Study 2.2.

In a final step, we used EQS 6.1 to test if inductive social identity formation was related to entitativity via individual distinctiveness and if inductive social identity formation was related to identification via entitativity (see Figure 2.3). Parameters were estimated using a maximum likelihood method. The chi-square statistic was not significant, $\chi^2(1) = .07$, $p = .792$, and other fit indices indicated a good fit as well, CFI = 1.00, RMSEA < .001. Moreover, Wald and LaGrange Multiplier tests suggested that no paths could be added or removed, to improve the model fit. All parameters were significantly different from zero. Again, alternative models yielded worse fit[6]. This provides additional evidence for the idea that the inductive formation of a group identity can result in a strong sense of unity partly because individuals within the group feel distinctive. Moreover, feeling distinctive within a group can result in identification, via a sense of entitativity.

Discussion

The results provide support for our model across a much larger variety of groups. When participants perceived the group identity to be formed out of individual members' contributions, they felt more distinctive within the group. This distinctiveness helped them to perceive the group as an entity, which in turn resulted in stronger identification.

In this study, we broadened and structured the groups participants thought about. For one, instead of generating groups themselves, participants were instructed to think about a particular group. Moreover,

[6] The alternative models tested, fitted the data less well. Alternative model 1: Inductive social identity formation is related to individual distinctiveness via entitativity and identification, $\chi^2(1) = 24.67$, $p < .001$, CFI = .88, RMSEA =.333. Alternative model 2: Inductive social identity formation is related to identification via individual distinctiveness, and inductive social identity formation is related to entitativity via identification, $\chi^2(1) = 4.22$, $p = .040$, CFI = .98, RMSEA = .123.

participants had to think of different types of groups (cf. Lickel et al., 2000). Lickel et al. showed that group type affects perceptions of entitativity. However, even when controlling for any variations in entitativity due to group type, the predicted model was supported.

Although we tested alternative models, the cross-sectional nature of the data prevents us from drawing strong conclusions about causality. In Study 2.3, we therefore sought to introduce specific between-group variation in levels of inductive social identity formation in order to introduce an extraneous variable into our models. Specifically, we systematically varied group size, expecting that in small groups the process of inductive social identity formation will be stronger than in larger groups. In smaller groups, it is easier to imagine how individuals can influence the identity of the group because the individual is more visible. There is less "distance" between the individual and the group as a whole because the group consists of fewer individuals. Therefore, we used group size as an extraneous independent variable in the third study.

Study 2.3

As in Study 2.1, participants were asked to name groups. In order to systematically vary the level of inductive social identity formation, participants were instructed to think of groups that varied in size from small to large. We expected that inductive social identity formation would be higher in smaller groups and tested the same model as in the previous studies using group size as independent variable.

Method

In total, 181 students participated in the third study. During the study, all participants named three small (4 to 15 members), three medium (30 to 50 members), and three large sized groups (more than 200 members). Then, depending on group size condition (between subjects), they answered questions about the first-mentioned and third-mentioned groups (within subjects) of a specific size. We chose the first and third mentioned group to assure that there would be variation in self-relevance of the groups. Moreover, the repeated measures structure allowed for more power. Data of some participants were not useful because they did not name a group, or because they listed groups of an incorrect size. Of the remaining 174 participants (43 men, M_{age} = 19.51), 165 fully filled in questions about the first group and 161 fully filled in questions about the third group. In total, we had 118 observations for small sized groups, 92 for medium sized groups, and 116 for large sized groups. The operationalization of variables was identical to Study 2.1 (Table 2.3). Because of the extraneous manipulation of inductive social identity formation, we used the index of inductive social identity formation as a manipulation check.

Results

Because all variables were measured in relation to two groups, the data structure was nested. Groups (Level 1) were nested within individuals (Level 2) with an intraclass correlation of .23. We compared the one-level intercept-only model with the two-level model on entitativity, using the mixed models procedure (in SPSS). The difference in deviance between the two models was significant, $\chi^2(1) = 8.10$, $p = .004$. It was decided to use a multilevel approach.

Table 2.3. Descriptive statistics (over groups) of the main variables and their correlations in Study 2.3

	Measure	*M*	*SD*	α	1	2	3	4	5	6	7	8
1.	Inductive Social Identity Formation	4.84	1.14	.69	-							
2.	Individual Distinctiveness	5.48	1.39	-	.20**	-						
3.	Entitativity	4.58	1.35	.86	.33**	.29**	-					
4.	Identification	4.79	1.22	.94	.33**	.18**		-				
5.	Age	19.49	2.16	-	-.02	-.04	-.14*	.00	-			
6.	Sex	-	-	-	-.05	-.09	.02	.03	.17**	-		
7.	Group Size	-	-	-	-.25**	-.24**	-.31*	-.20**	.01	.00	-	
8.	Group (1st or 3rd)	-	-	-	-.08	-.11*	-.10	-.08	.03	.00	-.01	-

Note. * $p < .05$, two-tailed. ** $p < .01$, two-tailed.

Manipulation check. In the small sized group condition, participants often named workgroups, friends, sport teams, and family. In the medium sized group condition they mentioned student associations (e.g., fraternities, sororities), classes, colleagues, and relatives. The Dutch and students were often named in the large sized group condition. Group size was expected to be a negative indicator of inductive social identity formation. We checked the effectiveness of the manipulation with orthogonal linear and quadratic contrasts (Rosenthal, Rosnow, & Rubin, 2000), controlling for group (first or third group), gender and age. As expected, the relation between group size and inductive social identity formation was linear, $b = -.34$, $t(162) = -4.41$, $p < .001$, effect size $r = .33$, and not quadratic, $p = .461$. The larger the group, the less individuals were perceived to influence the group. Thus, the group size manipulation successfully influenced levels of inductive social identity formation.

Model tests. Next, we tested the hypothesis that group size was negatively related to entitativity via individual distinctiveness. In all mixed models, we controlled for group, gender, and age. In a first step, we regressed individual distinctiveness onto the contrasts. The linear contrast was significant, $b = -.40$, $t(163) = -4.12$, $p < .001$, effect size $r = .31$, but the quadratic contrast was not, $p = .763$. The regression for entitativity showed the same pattern: linear contrast, $b = -.50$, $t(157) = -5.71$, $p < .001$, $r = .41$; quadratic contrast, $p = .493$. As expected, the larger the group, the less participants felt distinctive within their group and perceived the group as an entity.

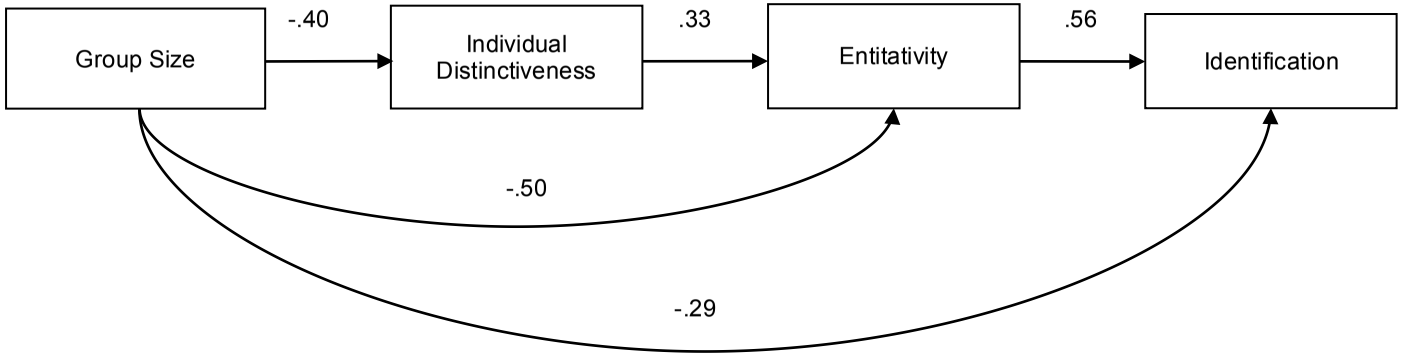

Figure 2.4. Structural equation model of group size, individual distinctiveness, entitativity, and identification in Study 2.3 (unstandardized estimates).

In a second step, individual distinctiveness was added to the model of entitativity. In line with our hypothesis, the negative linear relation between group size and entitativity became less strong, b = -.41, $t(164)$ = 4.61, p < .001, r = .34. Individual distinctiveness positively predicted entitativity, b = .22, $t(324)$ = 4.26, p < .001, r = .23, and mediated the negative linear relation between group size and entitativity. Testing for mediation using the method recommended by Krull and MacKinnon (1999), a Sobel test indicated that the indirect effect was significant, b = -.09, Z = -2.96, p = .003.

In a final step, we used Mplus (Muthén & Muthén, 2007) to test our model with a multilevel structural equation modeling (mSEM) approach. We tested if group size was related to entitativity via individual distinctiveness and if group size was related to identification via entitativity (see Figure 2.4). The mSEM controls for the dependency of the observations within individuals. Moreover, we controlled for the effect of which group was judged (first or third group). Parameters were estimated using a maximum likelihood method. The model yielded good fit, $\chi^2(1)$ = .08, p = .782, CFI = 1.00 RMSEA < .001. All parameter estimates were significantly different from zero. All three linear contrasts were significant, and all quadratic contrasts were non-significant, with one exception. Although identification was strongly predicted by the linear contrast, b = -.29, z = -3.78, p <.001, effect size r = .29, r^2 = .08, unexpectedly there was a weaker effect for the quadratic contrast to be significant as well, b = .14, z = 2.97, p =.003, effect size r = .23, r^2 = .05. However, because this effect was descriptively much smaller, we conclude that the linear effect better

describes the data and that the prediction was upheld (see Rosenthal, 1991). As in the previous two studies, all alternative models yielded worse fit[7].

Discussion

The results of Study 2.3 support our model with group size as an extraneous variable. As expected, inductive social identity formation could be manipulated by group size. In small groups, inductive social identity formation was perceived to be stronger than in larger groups. Within those smaller groups participants also felt more distinctive. In turn, this perceived distinctiveness positively predicted the degree to which participants perceived the group as an entity, which in turn resulted in stronger identification with the group.

In line with Brewer (1991; Brewer & Harasty, 1996), this study thus shows that identification and entitativity are higher for small groups than for larger groups (but see McGarty, Haslam, Hutchinson, & Grace, 1995, for different results). However, instead of focusing on the role of intergroup distinctiveness as an underlying cause of this effect, we focused on the role of individual distinctiveness. We found that individual distinctiveness was a partial mediator in the relation between group size and entitativity because group size affected the perception of inductive social identity formation. We could also replicate the original model with inductive social identity formation as predictor, controlling for the between-

[7] The alternative models tested, fitted the data less well. Alternative model 1: Group size is related to individual distinctiveness via entitativity and identification, controlling for group, $\chi^2(4) = 13.16$, $p = .011$, CFI = .96, RMSEA =.084. Alternative model 2: Group size is related to identification via individual distinctiveness, and group size is related to entitativity via identification, controlling for group, $\chi^2(1) = 14.03$, $p < .001$, CFI = .94, RMSEA = .200.

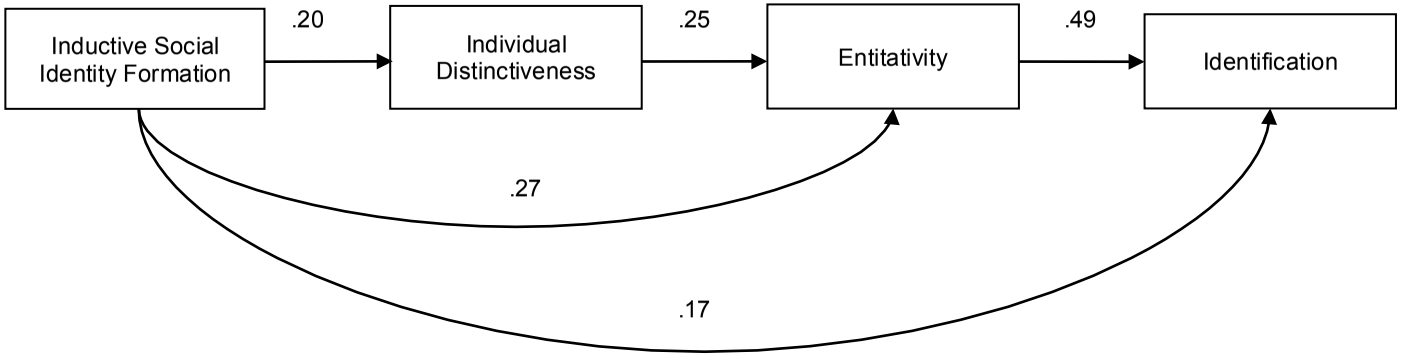

Figure 2.5. Structural equation model of inductive social identity formation, individual distinctiveness, entitativity, and identification in Study 2.3 (unstandardized estimates).

group variance due to group size[8]. This means predictions are upheld both within and between groups. Thus, despite the lower levels of inductive social identity formation in larger groups, variations in levels of perceived inductive social identity formation also have the predicted effects in larger groups.

Although inductive social identity formation was not directly manipulated, the use of group size as extraneous variable provided additional support for the causality that the theoretical model assumes. Moreover, our model fitted the data better than alternative models that could explain the correlations. This implies that distinctiveness does not impede the emergence of a sense of unity, but may contribute to it.

General Discussion

With this paper, we aimed to integrate the work on inductive processes of social identity formation (Postmes et al., 2005a/b) with work on entitativity (Brewer et al., 2004; Campbell, 1958; Lickel et al., 2000). In three studies, we tested the prediction that feelings of individual distinctiveness could mediate the relation between inductive social identity

[8] We used Mplus (Muthén & Muthén, 2007) to test the initial hypothesis that inductive social identity formation is related to entitativity via individual distinctiveness and that inductive social identity formation is related to identification via entitativity (see Figure 2.5). In the structural equation model, we controlled for the dependency of the observations within individuals and the effects of group size and which group was judged. Parameters were estimated using a maximum likelihood method. The model yielded good fit, $\chi^2(1) = .54$, $p = .464$, CFI = 1.00 RMSEA < .001. All parameter estimates were significantly different from zero. Again, alternative models yielded worse fit. Alternative model 1: Inductive social identity formation is related to individual distinctiveness via entitativity and identification, $\chi^2(1) = 2.69$, $p = .101$, CFI = .99, RMSEA = .072. Alternative model 2: Inductive social identity formation is related to identification via individual distinctiveness, and inductive social identity formation is related to entitativity via identification, $\chi^2(1) = 19.71$, $p = .003$, CFI = .97, RMSEA = .155. These results again support our prediction that inductive social identity formation is related to entitativity via individual distinctiveness. Moreover, this pattern is upheld across a wide variety of groups.

formation and entitativity, which in turn could result in identification (Figure 2.1). The studies provided consistent support for the integrative theoretical model proposed. In the first study, we provided support for the model in self-selected small groups. Study 2.2 provided additional support with a much broader set of groups that were not self-selected and with extra items measuring individual distinctiveness. Finally, Study 2.3 provided support for causality in the model by using group size to vary the level of inductive social identity formation systematically.

Until now, research on the induction of shared social identity has only considered zero-history small interactive groups within an experimental setting (Jans, Postmes, & Van der Zee, 2012; Postmes et al., 2005b; Swaab et al., 2008). The approach used in the present allowed us to examine a broad spectrum of everyday groups in order to provide a deeper insight into the underlying processes of inductive social identity formation

The results showed that processes of inductive social identity formation also influence groups outside the lab and groups of various sizes. As expected, in larger groups it becomes more difficult to perceive the individual contributions to the group identity because the distance between the individual and the group as a whole becomes larger. But even when controlling for group size, within groups inductive social identity formation still has an effect on the individual's perceived distinctiveness, entitativity, and identification. However, in line with the ASPIRe model (Haslam et al., 2003); it might be that in larger groups individuals influence the formation of a social identity more indirectly via their subgroups. In future research, it would be interesting to test whether in large groups the effect of inductive social identity formation on entitativity is mediated by subgroup distinctiveness, more so than by individual distinctiveness.

In all three studies, the correlation of individual distinctiveness (single item or multiple items) with entitativity and identification was positive. This provides support for the idea that within-group differences do not have to obstruct a sense of unity and group cohesion (see also Hornsey & Jetten, 2004; Jetten et al., 2006; Packer, 2008; Rink & Ellemers, 2007). However, instead of individual distinctiveness being a consequence of identification with groups whose norms encourage individualism and diversity, the present findings suggest that individual distinctiveness can be an antecedent of perceived entitativity and in turn identification. It seems that feelings of individual distinctiveness may strengthen one's perception of group unity and one's attachment to the group. It has often been proposed that being distinctive within a group would hamper group belongingness (e.g., Codol, 1975). These findings go against this pervasive idea that social cohesion and diversity are somehow antagonistic.

On the other hand, the finding of a positive relation between individual distinctiveness and identification is entirely consistent with the rationale behind inductive social identity formation. Here, unique expressions of individual members can be the foundation of a social identity (Postmes et al., 2005b). Because personal identities can provide the input out of which a social identity is formed, the induction of a social identity means that personal and social levels of identity need not be antagonistic (Postmes et al., 2005a).

In the entitativity literature, the necessity of similarity for perceiving groupiness has been questioned as well (Crump et al., 2010). Similarity is seen as just one of the possible predictors of entitativity (Campbell, 1958; Lickel et al., 2000). The lens through which one looks at a social aggregate determines whether perceiving similarity is key to perceiving groupiness (Brewer et al., 2004; Rutchick et al., 2008). Our results are in line with a

perspective on groups as dynamic agents, in which individuals are interdependent in the pursuit of common goals and intentions. Here, similarities among group members are not diagnostic for entitativity.

Taking this argument a step further, we argued and found that individual distinctiveness was diagnostic for entitativity, which in turn led to identification (see also Castano, 2004). This implies that homogeneity does not have to be a prerequisite for the formation of a shared identity. The idea that homogeneity and identity are related is strongly imbedded in the literature; for example questionnaires of group identification may even include measures of in-group homogeneity and self-stereotyping (e.g., Leach et al., 2008). Because, in our reasoning, in-group homogeneity and self-stereotyping are less integral aspects of identification with groups that developed their shared identity organically through induction, we focused on the self-investment dimension of identification.

Our results provided support for a partial mediation of individual distinctiveness in the relation between inductive social identity formation and entitativity. The reason that there was no full mediation in any of the studies is that numerous other processes and factors besides individual distinctiveness may explain why inductive social identity formation can lead to entitativity. Among these are known predictors of entitativity and shared identity such as interaction and interdependence (Gaertner et al., 2006; Lickel et al., 2000; also Campbell, 1958) as well as the formation of a shared social identity content such as norms and self-stereotypes (e.g., Swaab et al., 2008; Smith & Postmes, 2011a) or the formation of out-group stereotypes (Smith & Postmes, 2011b). In the present research, we could not easily consider all these other within-group aspects because they vary considerably from group to group and are hard to operationalize consistently as a result. Nevertheless, the findings clearly showed that in addition to these other

factors, the presence of individuality within the group may, at least in some group contexts, make a consistent positive contribution to the psychological emergence of a sense of unity across a wide variety of groups and settings.

The aim of this paper was to provide a first test of the possible mediating role that individual distinctiveness plays in inductive social identity formation. Because these hypotheses were new and to our best knowledge no scales of inductive social identity formation existed, we had to develop new scales. The results attest to the utility of this newly developed index but nevertheless it would be worthwhile if future research provides further evidence of construct validity of the index of inductive social identity formation, for example by directly manipulating the degree of inductive social identity formation experimentally.

In future research, it would also be important to consider how these inductive processes of forming a social identity from the bottom up interact with the more traditional top-down processes of deducing a shared identity from (for example) intergroup comparisons. There is nothing to prevent processes of inductive and deductive social identity formation from co-occurring and in most natural cases they probably will. When group members adopt a deductive route to social identity, they infer things about individual group members from commonalities at a superordinate level. Here, theory would lead us to expect that feeling similar is the underlying process for perceiving entitativity due to the highlighting of commonalities (Turner, 1982). But groups are multifaceted and complex entities. The existence of certain uniform characteristics (an essence, perhaps) that define group boundaries and thereby form the foundation for a common categorization as in-group, may well coincide with the existence of within-group diversity and pluralism on other dimensions that contributes to the

shared induction of norms and practices. Such co-occurrence of deductive and inductive processes, even in abstract social categories, may well be key to keeping the group viable and sustaining its ability to operate as an entity. Group leaders might play a key role in creating the context within which these processes may co-occur (see Haslam, Reicher, & Platow, 2011)

In sum, our results show that inductive processes are important for perceiving groupiness and identification. The process of inducing a shared identity from the bottom up (that is, through individual contributions of group members and subgroups) helps individuals to feel that they occupy a more distinctive position within the group. In a sense, this demonstrates that personality is a feature that emerges at least in part through the group (cf. Durkheim, 1984; Postmes & Jetten, 2006). However, embedding these perceptions of distinctiveness within an inductively formed group has powerful and potentially beneficial consequences. Instead of the traditional misfit assumption that individuals who "stick out" are unlikely to "fit in", this research shows that there are cases in which feeling distinctive within the group actually contributes positively to experiencing a sense of oneness with the group—both in terms of unity and strong group identification. Thus, being able to see how individuals contribute to a group identity provides scope for within-group diversity. In such cases, the more diverse a group is, the stronger the collective might be.

Chapter 3

WITHIN-GROUP DIFFERENCES AND SOCIAL IDENTITY FORMATION [9]

[9] Chapter 3 is based on: Jans, L., Postmes, T., & Van der Zee, K. I. (2012). Sharing differences: The inductive route to social identity formation. *Journal of Experimental Social Psychology*, *48*(5), 1145-1149. doi:10.1016/j.jesp.2012.04.013

The assumption that heterogeneity undermines social cohesion and communion is widespread in social psychology and beyond (e.g., Putnam, 2000). For example, it is often assumed that shared similarities are the foundations of social categorization and identification (Turner, 1985). Individuals identify with groups on the basis of shared characteristics such as skin color or attitudes. Minimal group research has shown that mere categorization of individuals into one social group on the basis of some arbitrary similarity, is sufficient to make individuals see their similar others as "in-group" and different others as out-group (Tajfel & Turner, 1979). This implies that the more within-group similarities there are, the stronger the social identity would be (Tajfel, 1978b). Thus, for heterogeneous groups it may be quite difficult to form a shared social identity. Indeed, research has shown that within-team differences tend to erode team identification (e.g. Luijters, Van der Zee, & Otten, 2008). More generally, diversity within teams has consistently been found to have negative effects on affective outcomes (see Milliken & Martins, 1996, for a review).

However, more recent research suggests that the outcomes of diversity in teams are more mixed and can be positive (Jackson, Joshi, & Erhardt, 2003). Sociological research suggests that, counter to Putnam's suggestions, diversity can actually foster social cohesion and communion, too (Savelkoul, Gesthuizen, & Scheepers, 2011). Indeed, in the present paper we propose that heterogeneity does not *necessarily* undermine the formation of a shared social identity because similarity is not the only

foundation upon which social identities can be built. In fact, we propose that shared differences can be a profound basis on which individuals can form a social identity. Unique and distinct contributions by group members (i.e., expressions of individuality) may contribute to the emergence of solidarity (Durkheim, 1984) and social identity (Jans, Postmes, van der Zee, 2011; Postmes, Haslam, & Swaab, 2005a; Postmes, Spears, Lee, & Novak, 2005b). We therefore propose that in groups characterized by within-group differences, a strong social identity can be formed on the basis of a process in which those differences are shared (inductive social identity formation). Thus, although within-group differences may at times undermine the emergence of a social identity (cf. Tajfel, 1978b), paradoxically, in the right circumstances these same differences may serve as foundation for the emergence of *new* social identities. This idea is examined in two studies that seek to demonstrate that while members of homogenous groups can form a strong social identity by a process of sharing similarities, members of heterogeneous groups can form as strong a social identity by a process of sharing individual differences, or individuality.

Forming Social Identities

In theory, the formation of social identities may be influenced through two distinct paths (Postmes et al., 2005a). On the one hand, superordinate categories may influence a social identity through a deductive route. Through a *top-down* process, group members form a social identity on the basis of shared characteristics that differentiate their in-group from other groups, as is the case in minimal group research (Tajfel & Turner, 1979). A soccer team for example can have a shared social identity symbolized by team colours and an outfit which are distinct from those of opposing teams. By knowing who the out-group is, and how they are

different from the in-group, a social identity can be deduced. This is described in self-categorization theory as a process of "depersonalization" of self and other in-group members in terms of a social identity—a form of perceptual homogenization (Turner, 1985). Whilst homogeneity fosters this process and thus aids the deduction of shared identity, in-group heterogeneity undermines it.

However, social identity formation may not only be formed through a deductive path. At the same time, inductive processes may influence the formation of a social identity. That is, social identities may also be shaped by individual contributions of group members. In this *bottom-up* process, the shared identity of the group may be induced on the basis of individual expressions by group members. Thereby, within-group differences may be integrated into the shared cognitive representation of the group (Swaab, Postmes, Van Beest, & Spears, 2007). This alternative pathway to identity formation may be strengthened to the extent that each individual group member contributes to it. The example of the soccer team also fits here. If we gave two teams the same shirts, and compared them with the same out-group, the content of the shared identity would still be different for the two groups, because the individuals that make up the team are different. That is, who we are is not just determined by who "they" are, but also by who "we", as separate individuals, are (cf. Gaertner, Iuzzini, Witt, & Oriña, 2006). Thus, it is clear that there are different routes to form strong social identities. Yet, surprisingly little research has investigated the inductive route to social identity formation, and no research has examined its implications for social identity formation in heterogeneous groups.

Forming Social Identities in Heterogeneous Groups

The idea of an inductive route to the formation of social identity has received some empirical support. Research has documented deductive and inductive processes in social influence (Postmes, et al., 2005b) and shown that these processes foster pro-social intentions and positive negotiation outcomes (Swaab, Postmes, & Spears, 2008). Research also suggests that measured levels of perceived inductive social identity formation may affect entitativity and social identification (Jans et al., 2011). But crucially, this prior research has not demonstrated experimentally that these processes affect social identification. Moreover, the suggestion above that heterogeneity can be the foundation for a strong social identity, provided that it is induced, has to our knowledge never been examined.

Indirect evidence for our proposition comes from research that has shown that groups who are given group norms of independence and individualism, or social values of diversity, can also increase groups' valuation of heterogeneity (e.g., Homan, Van Knippenberg, Van Kleef, & De Dreu, 2007; Jetten, Postmes, & McAuliffe, 2002; Postmes, Spears, & Cihangir, 2001). This research shows that when experimenters or other authorities activate or instil norms that diversity and heterogeneity ought to be valued positively, the group or organizational members do indeed start valuing diversity more. Further research has shown that also when a group *expects* heterogeneity, then diversity is valued more highly (Rink & Ellemers, 2007). In our view, the induction of shared identity in heterogeneous groups is qualitatively different, however. Induction is a process wherein an individual makes an active contribution to the emergence of a shared identity, simply because they have an opportunity (or "voice"). No prior norms or expectations about the heterogeneity need to be provided in this process, although it is possible that norms may emerge as a *consequence* of

having this ability to have influence. Thus, induction is not just the "fit" of group composition to shared social norms (cf. Rink & Ellemers, 2007).

In sum, this research tests the prediction that inductive processes can lead to the formation of a social identity. We test this prediction by measuring social identification directly, as well as measuring two closely related variables: the perceived entitativity (the perceptual groupiness of a social aggregate, Campbell, 1958), and (in Study 3.2) a behavioural measure of cooperation. These measures represent three important aspects of social identity, namely members' cognitive perception of the group as a categorical entity (entitativity), their affective relation to this entity (identification), and their willingness to act in concert with it (cooperation). In addition, this paper tests the prediction that while heterogeneity might be a problem in the process of deductively forming a social identity, heterogeneous groups can form a strong social identity inductively. To this end, we manipulate diversity in Study 3.2.

Study 3.1

In Study 3.1, social identity formation was manipulated by the way in which a shared representation of the group, in the form of a team shirt, is created. To find support for the formation of a social identity, we measured social identification and entitativity.

Method

Participants and design. Students (115 women and 41 men, M_{age}= 20.26) were randomly allocated to one of two conditions of social identity formation: deduction vs. induction. In total, 39 groups of 4 participants were formed. One participant was removed, because he participated twice.

Procedure. Participants were invited to the lab in groups of four[10]. As a manipulation of *social identity formation*, groups had to make team shirts. The intention for the manipulation was to vary the amount of visible individual contribution to a team t-shirt, while keeping everything else constant. Participants were seated around a table, and each participant was handed a white T-shirt with four blocks printed on it. In the deduction condition, the group was shown a design for a team shirt. In line with the process of identity deduction, participants were told that this design was distinctive for their group. They were instructed to copy this design onto their T-shirts with colour markers. In the induction condition, each group member was asked to individually design and draw one part of the team shirt. First, all group members drew their individual design on the first quarter of a t-shirt. Then, they copied this individual design onto the other T-shirts. In this way, each individual member made a direct and unique contribution to the development of a shared representation of the whole group. Thus, except for the extent to which individuals had the opportunity to make a unique contribution to the team-shirt, the two conditions were kept completely similar. In both conditions, the drawing task took ten

[10] This study also attempted to manipulate diversity of the group but this was unsuccessful according to the manipulation check and other dependent variables: all effects involving diversity were non-significant. The diversity manipulation sought to distinguish between employed and non-employed students but it turned out that most of the non-employed students had either been employed shortly before, were looking for employment, or both. We therefore do not report any of the effects involving diversity.

minutes to complete, and all group members spent the full ten minutes drawing their t-shirts. During the task participants were allowed to talk, but not about their drawings[11]. After the paint on the t-shirts had dried, participants were asked to put their team-shirts on. They were told that the team shirt was necessary for a task in the second part of the experiment. Then, participants put on their shirts and filled out a questionnaire. At the end of the experiment, groups were photographed. Unfortunately, the camera was not available at all times. In total, there were 13 group pictures of the deduction and 12 group pictures of the induction condition.

Dependent variables. The questionnaire consisted of statements with 7-point scales (1 = *fully disagree*; 7 = *fully agree*). Identification was measured with the solidarity and satisfaction subscales of Leach et al. (2008; 7 items, $\alpha = .93$, e.g., "I felt connected to this group" and "It gave me a good feeling to be a member of this group"). Four items measured *entitativity* (Jans et al., 2011), e.g.: "Members of this group are as one" ($\alpha = .88$). The manipulation check of social identity formation consisted of the item "The group identity was formed by members themselves."

To test if the induction condition only manipulated the extent to which group members could make a distinct contribution and not the amount of effort invested in the task, two independent coders rated the drawings on the team shirts. They were asked to rate the amount of effort each member put into the team shirt ($r = .53$, $p = .000$) on a 5-point scale (1 = *very little*; 5 = *very much*).

[11] Although we did not record the interactions and so cannot do a formal content analysis, there was actually very little interaction during the task: participants spent most of their time drawing in silence. Moreover, a recent unpublished study provides a replication of these results using a manipulation of induction/deduction during which participants could not interact (Jans, Postmes, van der Zee, & Seewald, 2013; Study 4.2), with similar effects on identification.

Results

The hypotheses were tested in a multilevel analysis (HLM; Raudenbush & Bryk, 2002), in which we looked at the effects of social identity formation at the group level (Level 2) on variables measured at the individual level (Level 1)[12]. Intraclass correlations (ICC's) were relatively high for groups of such a small sample size (see Bliese, 2000), and given the time participants spent on the drawing task. Thus, a large proportion of the total variance in individual's identification and entitativity was attributable to their shared group membership (see Table 3.1).

Table 3.1. Social identity formation effect on entitativity and identification, intra-class correlations, group means and standard deviations in Study 3.1.

		Social Identity Formation				Deduction		Induction	
Dependent variables	ICC	γ	$t(37)$	R^2	$\chi^2(1)$	*M*	*SD*	*M*	*SD*
Identification	.33	.67 (.20)	3.32*	.33	10.40*	4.60	0.57	5.28	0.69
Entitativity	.32	.62 (.23)	2.72*	.22	7.64*	4.78	0.71	5.41	0.73

Note. Standard errors are in parentheses.
* $p < .01$.

Manipulation checks. As expected, the manipulation of social identity formation had a marginal significant effect on the formation check, $\gamma = .44$, $t(37) = 1.88$, $p = .068$. This main effect resulted in a significant improvement in the goodness of fit compared to a null model, $\chi(1) = 4.26$, $p = .038$, suggesting that social identity formation condition accounted for a considerable amount of variance. Participants in the induction condition felt more strongly that members themselves formed the group identity ($M_{group} = 5.28$, $SD_{group} = 0.81$), than participants in the deduction condition

[12] Similar effects were obtained when we aggregated individual-level responses to the group level.

(M_{group} = 4.82, SD_{group} = 0.67). Moreover, the manipulation had no effect on the perceived effort group members put in creating the team-shirt, $\gamma = .12$, $t(23) = 0.59$, $p = .560$.

Identification and entitativity. Social identity formation had significant effects on the outcomes. Participants in the induction condition identified more strongly with their group and experienced higher entitativity than participants in the deduction condition (see Table 3.1).

Discussion

Study 3.1 provides support that groups can form a shared social identity inductively. Induction resulted in a stronger sense of social identity than deductive processes did, as was reflected in higher identification and entitativity. These results extend previous research (Postmes, et al., 2005b; Swaab et al., 2008) by showing directly that induction increases levels of cognitive and affective identification. Moreover, the results support work of Gaertner et al. (2006), suggesting that intra-group processes can be the source of entitativity and positive group regard. The finding that induction even results in higher levels of identification and entitativity than deduction, seems to suggest that within these ad hoc groups, members assume more within-group differences than similarities. Although, this provides support for the suggestion that shared identities can be formed out of distinct contributions by group members, it does not directly test the prediction that inductive processes of social identity formation would be a good method to unite groups that are heterogeneous.

Study 3.2

In order to seek support for our proposal that heterogeneity within groups can foster unity, we replicated Study 3.1 with a high-impact manipulation of diversity. We chose to manipulate diversity by providing false feedback on within-group differences in personality. Moreover, we included cooperation as an extra dependent variable, to show that social identity formation leads to actual group-serving behaviour.

Method

Participants and design. Students (74 women, 19 men; M_{age}= 21.44) were randomly assigned to groups of three in a 2 (Diversity: Homogenous vs. Heterogeneous) x 2 (Social Identity Formation: Induction vs. Deduction) design.

Procedure. *Diversity* was manipulated by providing false feedback on a personality questionnaire (Hendriks, Hofstee, & De Raad, 1999). The personality questionnaire was taken before participants were invited in groups to the lab. Participants in the homogeneous condition were told that group members had very similar personalities. Participants in the heterogeneous condition were told that group members had very different personalities. Then, *social identity formation* was manipulated as in Study 3.1. This time the T-shirts had three blocks printed on them, because there were three members in each group. After the groups completed their team shirts in ten minutes, participants filled in questionnaires.

Dependent variables. The manipulation check for social identity formation, *identification* (α = .90) and *entitativity* (α = .90) were measured as in

Study 3.1. As a diversity manipulation check, participants responded to the item: "I am similar to the average group member". Actual *cooperation* was measured through a public goods game in which participants had to decide whether or not to share a hypothetical amount of twenty euros. Shared money would be doubled and equally divided among group members. Thus, individual pay-off was higher in case of not sharing, while group pay-off was higher in case of sharing.

Results and Discussion

The hypotheses were tested in a multilevel analysis (HLM; Raudenbush & Bryk, 2002), in which we looked at the effects of social identity formation at the group level (Level 2) on variables, measured at the individual level (Level 1). The ICC's for identification and entitativity were .15 and .28, respectively.

Manipulation checks. The manipulations were successful. Diversity had a significant effect on the diversity check, $\gamma = -2.03$, $t(29) = -9.25$, $p < .001$. Members of homogenous groups felt more similar to the average group member ($M_{group} = 4.88$, $SD_{group} = 0.56$), than members of heterogeneous groups ($M_{group} = 2.84$, $SD_{group} = 0.67$). Adding diversity to the empty model improved the goodness of fit significantly, $\chi(1) = 41.82$, $p < .001$.

Social identity formation had a significant effect on the formation check, $\gamma = .82$ $t(29) = 3.84$, $p < .001$. Participants in the induction condition felt more that members formed the group identity themselves ($M_{group} = 5.10$, $SD_{group} = 0.54$), more than participants in the deduction condition ($M_{group} = 4.29$, $SD_{group} = 0.64$), model fit improvement $\chi(1) = 12.88$, $p < .001$. All other effects were not significant.

Identification. Main effects of diversity and social identity formation on identification were not significant, $|t|$'s< .47. As expected, we found a significant interaction effect of diversity and social identity formation on identification, $\gamma = .55$, $t(27) = 2.51$, $p = .019$, model fit improvement $\chi(1) = 6.48$, $p = .011$ (see Figure 3.1). Members of heterogeneous groups identified significantly more with their group when the group identity was induced rather than deduced, $\gamma = .65$, $t(27) = 2.07$, $p = .048$. For members of homogenous groups, if anything there was a trend in the opposite direction, $\gamma = -.45$, $t(27) = -1.47$, $p = .153$. Moreover, in line with the predictions from social identity theory (Tajfel, 1978b), identification was marginally significantly higher for homogeneous than for heterogeneous groups when the social identity was deductively formed, $\gamma = -.63$, $t(27) = -2.01$, $p = .054$.

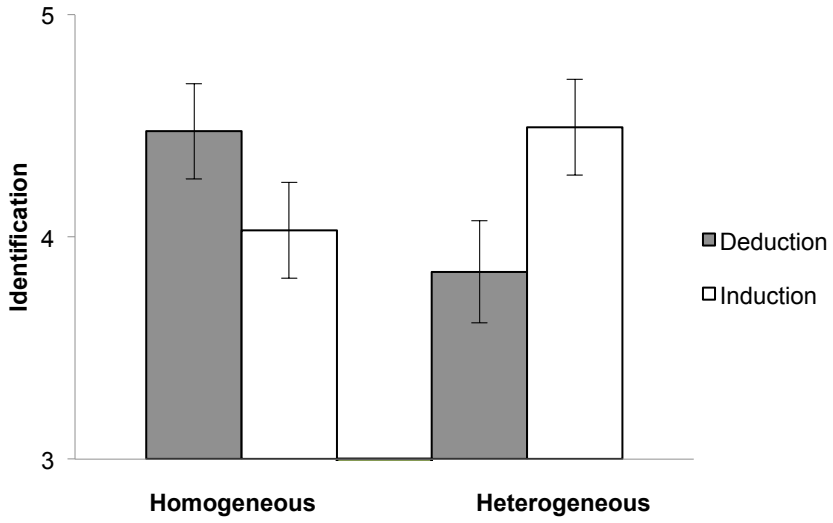

Figure 3.1. Interaction effect of diversity and social identity formation on average identification, with standard errors.

Entitativity. No significant effects were found on entitativity. However, the interaction of diversity and social identity formation, $\gamma = .48$, $t(27) = 1.57$, $p = .127$, showed the same pattern of results, and model fit improvement was marginal, $\chi(1) = 3.73$, $p = .053$.

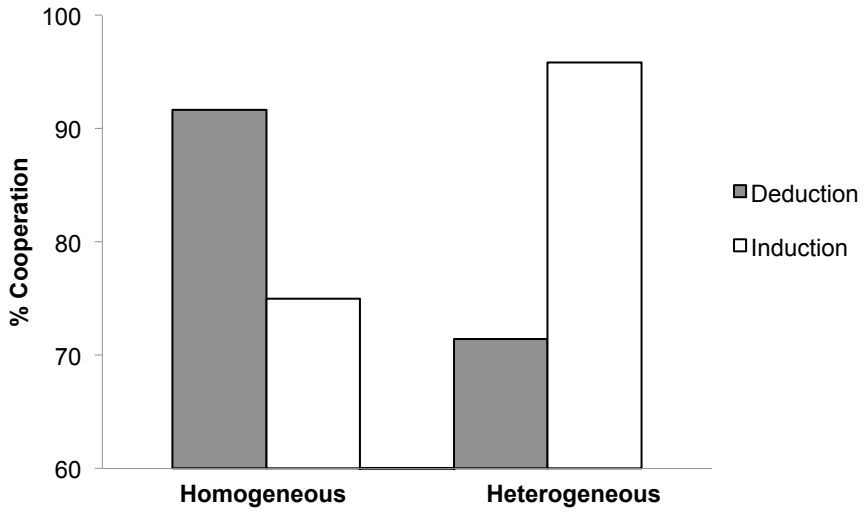

Figure 3.2. Interaction effect of diversity and social identity formation on percentage of cooperation.

Cooperation. Participants could cooperate by sharing money with the group. Overall, 83.9 % decided to share. We tested the effects of condition on cooperation with a logistic multilevel analysis (1 = *sharing*), with Laplace approximation (Raudenbush & Bryk, 2002). The effects of diversity and social identity formation were not significant, t 's < .55, but the interaction was significant, $\gamma = 1.76$, $t(27) = 2.16$, $p = .040$ (see Figure 3.2), model fit improvement $\chi(1) = 7.63$, $p = .006$. Members of heterogeneous groups cooperated marginally more with their group when the identity was inductively rather than deductively formed, $\gamma = 2.22$, $t(27)$

= 1.94, p = .062. For members of homogenous groups, if anything the trend was in the opposite direction, γ = -1.30, $t(27)$ = -1.08, p = .290.

Thus, the results from Study 3.2 provided support for our hypothesis. Diversity does not hinder inductive social identity formation. Heterogeneous groups could form as strong a social identity inductively, as homogeneous groups could deductively, as evidenced by higher identification and more group-serving behaviour.

General Discussion

Two studies support the idea that a social identity can be formed on the basis of within-group diversity but only if it was formed inductively. In Study 3.1, inductive social identity formation resulted in stronger identification and entitativity than deductive social identity formation. Study 3.2 replicated these effects in heterogeneous groups, but further showed that deduction resulted in a stronger social identity in homogeneous groups compared with heterogeneous groups (e.g., as predicted by self-categorization theory; Turner, 1985). Interesting to note is that in Study 3.2, levels of identification were approximately equally strong in heterogeneous groups who had induced a shared identity, as in homogeneous groups that deduced one. This suggests in line with Postmes et al. (2005a) that different processes of social identity formation can produce ostensibly similar outcomes (i.e., comparable levels of entitativity and identification). Results of Study 3.2 also showed behavioural evidence for this same pattern: levels of cooperation paralleled those of identification. High social identification corresponded with a greater willingness to act in concert with the group.

The findings for deductive social identity formation fit the standard assumption in social psychology and beyond that homogeneity breeds

cohesion. This is also consistent with traditional social identity and self-categorization theory assumptions that similarity is the foundation of social identity (Tajfel, 1978b). However, we showed that heterogeneous groups can also create a strong social identity. This finding fits more recent propositions that diversity is not necessarily an obstacle but a potential opportunity for unity (cf. Hornsey & Jetten, 2004; Packer, 2008; Rink & Ellemers, 2007). Heterogeneous groups can function as well as homogeneous groups, as long as they can *use* their diversity. For example, research has found that group norms of independence and individualism, or social values of diversity increase appreciation of heterogeneity within groups (Homan et al., 2007; Jetten et al., 2002; Jetten, McAuliffe, Hornsey, & Hogg, 2006). Moving beyond this work, our studies show that social identity emerges in heterogeneous groups where no prior norms or values of diversity had been activated or imposed. In an inductive process, members can express who they are as an individual and contribute their individuality to the group, without hampering social identity formation.

Interestingly, our results also provide a hint that in truly homogeneous groups, deduction might result in a stronger social identity than induction. It seems that in order to form a strong social identity inductively, some within-group differences are beneficial. That is, the more heterogeneous the group, the larger each individual contribution to the group could be. Therefore, induction may lay the foundation upon which diversity becomes a social strength, rather than a weakness. Since the processes of inductive and deductive social identity formation are likely to co-occur in natural groups; both homogeneity and heterogeneity can foster the formation of a strong social identity. The shared similarities may help to define group boundaries and thereby form the foundation for a common categorization as in-group, while the within-group differences on other

dimensions contribute to the shared induction of norms and practices. Such co-occurrence of deductive and inductive processes, may well be key to keeping the group viable and sustaining its ability to operate as an entity.

Thus, whether diversity is associated with negative or positive outcomes may be due to which process of social identity formation has the upper hand. For example, in times of intergroup competition or conflict, deductive processes might be the dominant route through which a social identity is formed. Future research should investigate the conditions under which deductive or inductive processes are likely to take the upper hand. Moreover, future research should also explore in greater depth the different aspects of the inductive process, carefully disentangling the influence of, for example, inducing a shared identity in the process of making a unique contribution to the group's implicit goals or symbols (as in the present study), or inducing it from the explicit negotiation of a shared sense of identity, or inducing it from within-group interactions or the observation of in-group members' behaviours.

In sum, this paper suggests that social identity is not just a product of homogeneity. Strong social identities can emerge and thrive even in heterogeneous groups. Therefore, the prevailing assumption that heterogeneity undermines social cohesion and community should be reconsidered. Our findings suggest that we can greatly enhance the utility of the social identity concept for groups and group functioning if we shift our focus from studying existing social identities to the process by which new ones emerge.

Chapter 4

SOCIAL IDENTITY FORMATION AND THE DISPLAY OF INDIVIDUAL DISTINCTIVENESS [13]

[13] Chapter 4 is based on: Jans, L., Postmes, T., Van der Zee, K. I., & Seewald, D. (2013). *Achieving freedom from normative constraints through the formation of shared social identity.* Under review.

The paradox has often been observed: individualisation is a product of "strong" (highly developed, complex, well-organized, highly networked, etc.) societies. The ability to think and act for oneself requires a social context in which this kind of behaviour is tolerated. It follows that individuals do not conform blindly to group norms in all social settings nor in all groups. The present paper examines one particular aspect of this: it zooms in on the way in which social identities may be formed in such a way that individual group members feel free to express their distinctiveness.

Self-categorization theory (Turner, 1985) has traditionally focused on the formation of social identity as a top-down process in which social identities are deduced from commonalities among group members that differentiate the in-group from particular out-groups. More recently, the interactive model of identity formation (IMIF; Postmes, Haslam, & Swaab, 2005a) has examined "inductive" pathways to social identity formation, where expressions of individuality within a group are incorporated into the group's social identity from the bottom-up.

Recent research demonstrates that these two pathways operate differently in groups that are perceived to be heterogeneous or homogeneous. Homogeneity is a boost to deductive social identity formation. In contrast, heterogeneous groups can form a stronger shared identity inductively than deductively (Jans, Postmes, & Van der Zee, 2012). Indeed, research suggests that inductive social identity formation is somewhat stronger where other group members are perceived to be

different to (or at least distinct from) the self (Jans, Postmes, & van der Zee, 2011; see also Postmes, Spears, & Novak, 2005b).

The present research will explore the consequences of inductive social identities, once formed, for the subsequent behaviour of individual group members. Initial research suggests that processes of deduction and induction can have similar consequences for social identity formation: both pathways result in approximately similar degrees of identification, entitativity, cooperation, and social influence (Jans et al., 2012; Swaab, Postmes, & Spears, 2008; Postmes et al., 2005b). In the current paper, however, we focus on areas where there may be *different* behavioural consequences. In particular, homogenous groups can form a stronger social identity deductively than inductively. We expect that as a result, group members will express themselves in normative ways (Turner, 1991). In contrast, heterogeneous groups can form a stronger social identity inductively than deductively. As a result, we expect that within perceived heterogeneous groups that inductively form a shared identity, group members may continue to express themselves in idiosyncratic ways that could be considered as "deviant". That is, group members' expressions might be less bound by group norms.

Social identity and Norm conformity

The idea that people tend to conform to norms is prevalent throughout the social sciences, and is within modern social psychology, (among others) incorporated into the social identity approach. Group norms inform us which clothes we should wear, which opinions we can express, and whether we use a car or hop on a bike.

According to self-categorization theory (Turner, 1985), shared social identity and associated norms are deduced from commonalities between

group members that differentiate in-group members from members of other groups (Turner, 1985). When social identity becomes salient, group members are assumed to define themselves in group terms and internalize group norms. As a consequence, individuals are inclined to conform to group norms to express their social identity (Turner, 1991; Hogg & Turner, 1987). Indeed, norms can be understood in terms of a prototype that describes what group members should do or ideally would do in a given situation (Terry & Hogg, 1996; Turner, 1991; Turner, Wetherell, & Hogg, 1989). Following this reasoning, deviation from a group norm is seen as a sign of dissent and is evaluated negatively by other group members (Marques & Paez, 1994; Marques, Yzerbyt, & Leyens, 1988).

For the present paper, it is important to point out that social identity and associated norms are more likely to be deduced the smaller the within-group differences are in comparison to the between-group differences (the principle of meta-contrast; Turner, 1985; Turner & Oakes, 1986). Indeed, perceived similarity between group members fosters this deductive process of social identity formation (Jans et al., 2012). Furthermore, the extent to which a shared identity can emerge and becomes salient should subsequently encourage norm-consistent behaviour. Thus, within groups perceived to be homogenous, deductive processes should result in the formation of a strong shared identity, and predict norm-conforming behaviour in subsequent tasks.

Social identity and Norm Deviance

However, recently it has been suggested that social identities may also be formed inductively (Postmes et al., 2005a; cf. Turner, 1982). That is, individual expressions of group members may contribute to the formation of a shared social identity. Here, intragroup interactions inform the content

of social identity, and group norms and conventions are inferred from within-group differences as much as similarities. Indeed, research suggests that some degree of perceived heterogeneity helps groups to form a strong social identity through induction, and that members of heterogeneous groups can form a stronger social identity inductively than deductively (Jans et al, 2012).

The present research considers what leeway individuals within heterogeneous groups have to behave distinctively once such shared identities have inductively been established. When social identities are deduced, members should follow group norms (see above). But when social identities have been induced, the assumption that group members will always conform to the normative position of the group as an expression of their social identity, does not logically follow. Rather, since induced social identities are dynamically constructed in such a way that they accommodate within-group differences into the emergent shared identity, we assume that the formed identity is never completely "finished" and will thus remain more open to distinctive expressions. Hence, within heterogeneous groups, the process of induction should not lead to the formation of one fixed and static group norm of how to be but should enable group members to act more freely from normative constraints than would be possible if social identity was deductively formed out of homogeneity.

We are not the first to suggest that group members may not always conform to group norms (Jetten & Hornsey, 2011; Moscovici, 1976). Indeed, it has been suggested that in some cases, highly identified group members may be particularly invested in deviating from group norms (Hornsey, 2006; Morton, Postmes, & Jetten, 2007; Packer, 2008; 2011). That is, high identifiers are more likely to act with the group's interest in

mind, and in some cases deviating from group norms may be perceived as more *beneficial* for the group than conforming to group norms.

For one, highly identified group members may deviate from group norms or criticize them, when they believe the group norms to be flawed, corrupt, immoral, and harmful for the group, in the hope of changing them (Hornsey, 2005/2006; Packer, 2008). Furthermore, Packer (2011) suggested, that even when individuals privately endorse a group norm, high identifiers may still publicly express opinions that go against the norm if they believe this deviance to be beneficial for the group (which he calls strategic non-conformity, see also Morton et al., 2007), such as when deviance is believed to enhance the creativity or performance of the group (cf. De Dreu, 2002; De Dreu & West, 2001)[14]. A corollary of this is that low identifiers might often be more marginal group members–they may have more to lose (or less to gain) from dissenting.

The present paper's suggestion for why social identity can foster anti-normative behaviour is somewhat different. When perceived heterogeneous groups have inductively formed a shared identity out of heterogeneity, group members might simply *continue* expressing themselves in idiosyncratic (or deviant) ways. We do not believe this is necessarily the result of identification increasing members' responsibility towards the group. Rather, we suggest that because social identity and group norms are induced, and therefore founded upon multiple different viewpoints, the group remains more open to distinctive expressions, as it does not challenge the unity of the group.

[14] Although dissent may foster creative and divergent thinking, individuals within groups often do not express dissent (see Nemeth & Nemeth-Brown, 2003).

Overview

The aim of our research was to extent the work on social identity formation, testing whether identities that are formed inductively allow more scope for norm-inconsistent behaviour. In particular, we predict that homogeneous groups can form a stronger identity deductively than inductively, and that this should result in more norm-consistent behaviour. In contrast, we predict that heterogeneous groups can form a stronger identity inductively than deductively, and that this should result in more norm-*in*consistent behaviour.

We tested our predictions in two studies with a 2 (diversity: homogeneity vs. heterogeneity) x 2 (social identity formation: deductive vs. inductive) factorial design. The studies were designed in such a way that they reflected the manipulations used in Jans et al. (2012). To be able to control the experiment as much as possible and to keep the norms constant across conditions, we changed the paradigm used in previous research, by using bogus groups with bogus interaction, rather than real groups with real interaction.

In line with previous research, we measured identification and entitativity as indicators of social identity. Furthermore, we used a new dependent variable to measure norm-inconsistent behaviour. In particular we measured the extent to which participants are willing to generate arguments that go against a pre-established group norm.

In Study 4.1, German participants were asked to generate as many pro- and contra-arguments toward a university proposal for mandatory Dutch courses for all foreign students. Before argument generation participants were made to believe that German students in general and their experimental group in particular, held a clear norm that this proposal was a good idea. In Study 4.2, Dutch participants were asked to generate as many

pro- and contra-arguments toward a new governmental law stating students who did not finish their university study within 6 years would be fined, irrespective of personal circumstances. Before argument generation participants were made to believe that Dutch students in general and their experimental group in particular, held a clear norm that this law was bad.

Study 4.1

Method

Participants and design. German psychology undergraduates at a Dutch University (N =52, 40 Man, M_{age} = 21.52) were randomly assigned to conditions in a 2 (Diversity: Homogeneous vs. Heterogeneous) x 2 (Social identity formation: Deduction vs. Induction)[15] design.

Procedure and independent variables. Participants were informed that the experiment consisted of a small online group debate together with three other German students. They were seated behind a computer and were made to believe that they were communicating with the

[15] This study also included a personal identity condition, in which participants had an individual coat of arms and name. These results are not included in the paper because we did not have specific hypotheses about this condition. Also when we included the personal identity conditions, there were no significant effects on identification and entitativity, F's < 0.88. Furthermore, the trend of social identity formation on norm-consistent arguments became significant when the personal identities were included, $F(2,65) = 5.77$, $p = .005$, $\chi^2 = .15$. Participants in the personal identity generated significantly less norm-consistent arguments, compared to the other two conditions, Helmert contrast = -2.29, $p = .007$. Finally, on norm-inconsistent arguments, the interaction effect of diversity and social identity formation remained also significant, $F(2,65) = 3.39$, $p = .040$, $\eta^2 = .09$. However, simple main effects of identity formation were not significant within either condition of diversity (F's < 2.01). Within the homogenous condition, the mean in the personal identity condition (M = 2.69) was very similar to the mean in the deduction condition. Within the heterogeneous condition, the mean in the personal identity condition (M = 2.25) was in between the means of the other two conditions.

other group members. In reality, there was no interaction. The entire study was in German.

Diversity manipulation. Perceived diversity was manipulated by providing false feedback about personality (see also Jans et al., 2012). Participants completed the Five Factor Personality Inventory (FFPI; Hendriks, Hofstee, & De Raad, 1999, 30 items), and received bogus feedback about the personalities in the group. In the *homogeneous condition*, participants were told that all group members scored quite similar on the personality questionnaire and thus had similar personalities. In the *heterogeneous condition*, they were told that all group members scored quite differently on the personality questionnaire and thus had different personalities.

Social identity formation manipulation. Next, social identity formation was manipulated by the creation of a group representation that consisted of a coat of arms with group name. This manipulation was adapted from Jans et al. (2012)'s manipulation of social identity formation in which real groups made a team logo. In the *deduction condition*, participants were told the computer generated a unique coat of arms and name for their group. In fact, every participant in the deduction condition was presented the same coat of arms and group name (i.e., unum turma).

In the *induction condition*, participants were told each group member would contribute to the group name and coat of arms. Participants contributed the first syllable of their first name to the group name. The first syllables of the bogus group members were kept constant ("HaClaLi"), and the participant's syllable was added to form the group name. Then, participants were supposedly randomly selected to choose one aspect of the coat of arms. The participants always had to choose the coat of arms' shape, out of nine possible shapes. Other group members supposedly

selected the pattern and the colours (which were the same as those in the deduction condition).

Participants in the inductive condition, thus, had an individual contribution to the group, while participants within the deductive condition could not make such a contribution. In both conditions, the coat of arms was presented for the duration of the study as background on the computer screen.

Norm establishment. After manipulating diversity and social identity formation, we established an *explicit group norm* in order to assess divergence from that norm later on. Therefore, we selected a topic on which German students' attitudes were clear and outspoken. Participants were told that they would be debating the necessity of learning the local language when studying abroad, and whether mandatory Dutch courses should be implemented. Most German students hold the opinion that foreign students should learn the language of the host university[16].

Also in the current sample, there was a commonly shared norm that it is necessary for foreign students to master the national language of the host university. On a scale from 1(*absolutely not necessary*) to 7 (*absolutely necessary*) the median score was 6 (skewness = -1.347). Only three participants scored below the midpoint of the scale. Additionally, there also seemed to be a commonly shared norm regarding the discussion topic; Mandatory Dutch courses were seen as something positive (Median = 5.50, on a 7-point likert scale; skewness = -1.276), with only five participants scoring below the midpoint. The two questions correlated positively (r = .681, p < .001).To control for prior attitudes on our measure of norm

[16] A pilot study (N = 46 German students) showed that most German students think that it is necessary for foreign students to master the national language of the host university. On a scale from 1(*absolutely not necessary*) to 4 (*absolutely necessary*) the average score was a 2.96 (SD = .87), with 69.6 % of the participants scoring above the midpoint of the scale.

deviance, all participants who scored below the midpoint on either question (6 in total) were excluded from further analyses.

Participants got to read a bogus article stating a plan of the university to make Dutch courses mandatory for all foreign first- and second-year students. Participants wrote two short paragraphs in two consecutive rounds to express their opinions about this idea towards the other group members. The pre-written statements of the other group members displayed an overall more positive attitude (e.g. "That sounds reasonable. Of course, you have to learn a new language. In the end, there are only advantages"). This was meant to establish an explicit group norm that mandatory Dutch courses should be considered positive.

Argument generation. After the establishment of a group norm, participants were asked to generate as many pro- and contra-arguments regarding mandatory Dutch courses in ten minutes. The instructions stated that there would be a discussion about the generated arguments with the other group members afterwards. In fact, the experiment ended after they filled in several questionnaires.

Dependent variables. All measures could be answered on a 7-point Likert scale (1= *absolutely not*, to 7 = *absolutely*), unless otherwise specified.

Normative outcomes. The number of norm-inconsistent arguments was used as a measure of norm deviance. Thereby, two independent coders counted the number of norm-consistent (r = .954, p < .001) and norm-inconsistent arguments (r = .971, p < .001), separately. The number of norm-consistent and norm-inconsistent arguments had a marginally significant negative correlation (r = -.248, p =.096).

Manipulation checks. After, some task related questions[17], we measured manipulation checks of diversity and social identity formation. As a manipulation check of diversity we asked participants to what extent the personalities of the group members were different and similar (r = -.597). The manipulation check for identity formation consisted of one item asking to what extent participants felt involved in making the coat of arms (induction check).

Identification and Entitativity. In addition, as in Jans et al (2012), we measured identification and entitativity. Identification was measured with the satisfaction and solidarity components of the Leach et al. identification scale (2008),, e.g. "It is pleasant to be a member of this group" and "I feel a bond with this group" (α = .922). Entitativity was measured with items as I feel the members of this group are as one (4 items, α = .871; Jans et al., 2011)

Results

Manipulation checks. The mean of the diversity check in the heterogeneous condition was slightly higher (M = 4.00, SD = 0.99) than the mean in the homogeneous condition (M = 3.72, SD = 1.18). However, unexpectedly, there was no significant effect of diversity on the diversity check, $F(1,42) = 0.69$, $p = .412$, $\eta^2 = .016$. All other effects were also non-significant, F's < 1.23. In all conditions the scores were around the midpoint of the scale. The same was true for the effects of the manipulation of social identity formation on the induction check. Participants within the

[17] The questionnaires in Study 4.1 and 4.2, also included some questions about the tasks participants had to do, and a measure of divergent thinking (Basadur & Finkbeiner, 1985). The alpha of the divergent thinking questionnaire was very low (α = .633; .613, respectively), therefore, the internal consistency was too low to draw conclusions from these scales.

inductive condition scored slightly higher on the induction check (M = 3.57, SD = 1.90) than participants in the deductive condition (M = 2.96, SD =1.99) but the effect of social identity formation on the induction check was not significant, $F(1, 42) = 1.03$, neither were the other effects, $F's < 0.73$. It should be considered that in this study the manipulation checks were almost at the end of the study. The participants' experience during the group discussions may have added "noise" and somewhat diluted the effects. Given that our manipulations of diversity and social identity formation were very similar to those used by Jans et al.(2012), we assume that we did manipulate what we intended.

Normative outcomes. As the explicit group norm towards mandatory Dutch courses was positive, the number of arguments in favour of mandatory Dutch courses was considered as assessment of norm-consistent behaviour, whereas the number of arguments against the courses was considered an assessment of norm-inconsistent behaviour. In line, with this explicit group norm, and participants private opinions, considerably more norm-consistent (M = 8.13, SD = 3.86) than norm-inconsistent arguments (M = 2.43, SD = 2.27) were generated, $F(1,45) = 61.28$, $p < .001$, $\eta^2 = .58$.

Norm-inconsistent behaviour. The distribution of the number of norm-inconsistent arguments was somewhat skewed (skewness = 1.03, SE = .35, Median = 2, Max = 10 ideas). Therefore, we conducted an ANOVA on the log-transformed number of norm-inconsistent arguments (+1). In this analysis, only the interaction between diversity and social identity formation was significant, $F(1,42) = 5.82$, $p = .020$, $\eta^2 = .12$. Simple main effects showed that within the heterogeneous condition, participants came up with more norm-inconsistent arguments when the social identity was

induced, instead of deduced, $F(1,42) = 3.61$, $p = .064$, $\eta^2 = .08$. The pattern appeared to be reversed (but not significantly so) within the homogenous condition, $F(1,42) = 2.29$, $p = .138$, $\eta^2 = .05$ (see Figure 4.1). This pattern of results is in line with the hypothesis that members of heterogeneous groups that inductively formed a social identity are willing to show their distinctiveness by going against group norms.

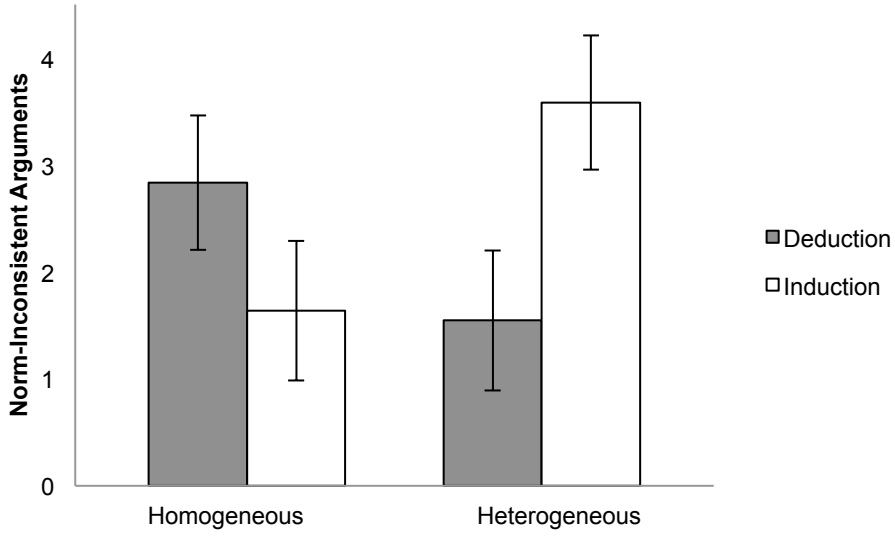

Figure 4.1. Interaction effect of diversity and social identity formation on norm-consistent arguments in Study 4.1 in means (not medians), with standard errors.

Norm-consistent behaviour. Although, norm-consistent behaviour was not the variable of our interest, we also tested whether perceived diversity and social identity formation affected the number of norm-consistent arguments generated. Diversity had a (marginal) effect on the number of norm-consistent arguments generated, $F(1,42) = 3.06$, $p = .088$, $\eta^2 = .07$, and there also was a slight trend of social identity formation on this outcome variable, $F(1,42) = 2.77$, $p = .103$, $\eta^2 = .06$. These effects were not

specified by a significant interaction, $F = 0.22$. More norm-consistent ideas were generated in the homogenous group than in the heterogeneous group. Furthermore, slightly more norm-consistent ideas were generated in the deduction condition compared to the induction condition (See Figure 4.2). It thus appeared that participants in heterogeneous groups that inductively formed a social identity were the least likely to generate norm-consistent arguments, whereas participants within the homogeneous groups that deductively formed a social identity were the most likely to generate norm-consistent arguments.

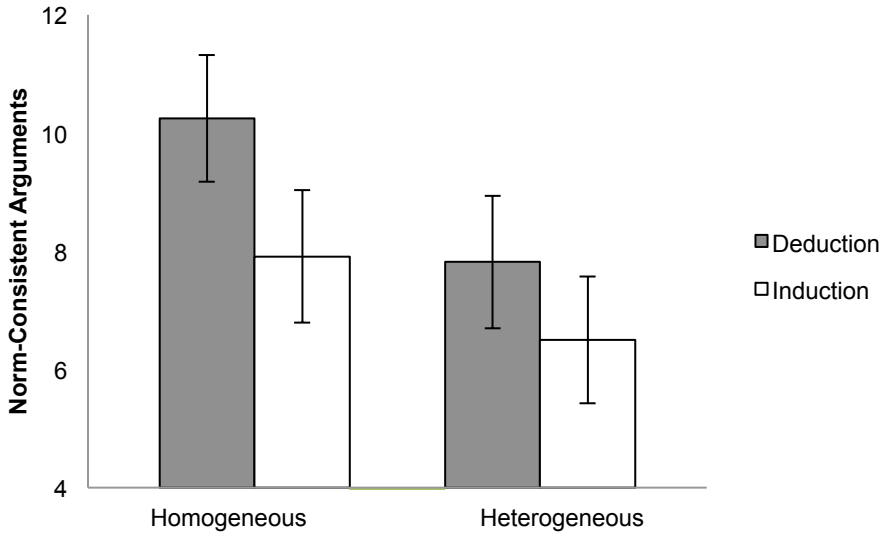

Figure 4.2. Interaction effect of diversity and social identity formation on norm-consistent arguments in Study 4.1, with standard errors.

Identification and Entitativity. There were no effects of diversity and social identity formation or their interaction on identification, *F's* < 1.08. The effects on entitativity were also not significant, *F's* < 1.10. Identification and entitativity were measured at the end of the experiment, after the manipulation checks.

Discussion

Results of Study 4.1 were largely in line with our hypotheses. As expected, participants in groups that were perceived to be heterogeneous that inductively formed a social identity generated more arguments against the group norm than when social identity was deductively formed. They also appeared to be the least likely to generate arguments consistent with group norms. This seems to suggest that the identity formed in heterogeneous groups through inductive processes is qualitatively different than would be suggested by self-categorization theory. While the latter suggests depersonalization and norm conformity, the first seems to allow group members to break free from such normative pressures.

Although the results for norm-inconsistent behaviour are in line with our expectation, we did not find effects on our manipulation checks and identification and entitativity. One possible reason for this is that these variables were measured at the end of the experiment, after idea generation. This might have diluted the effects of the manipulations. Study 4.2 was designed to remedy this.

Study 4.2

Study 4.2 aimed to replicate the results of Study 4.1, as well as previously reported effects on identification and entitativity (Jans et al., 2012). To this end we adapted the design. In Study 4.2, we measured the manipulation checks immediately after the manipulations and measured identification and entitativity twice (once immediately after the manipulations checks, and a second time after idea generation). Second, to make the bogus group situation more realistic, we tried to make the

manipulation of social identity formation and diversity stronger. Third, we used another sample: Dutch rather than German students.

Method

Participants and design. Seventy-nine Dutch psychology undergraduates (12 Man, M_{age} = 18.95, SD_{age} = 1.25) were randomly assigned to conditions of a 2 (Diversity: Homogeneous vs. Heterogeneous) x 2 (Social identity formation: Deduction vs. Induction) factorial design. Four participants were non-Dutch and therefore deleted from analyses.

Procedure and independent variables. Participants were informed that the experiment consisted of a small online group debate together with three other students. They were seated behind a computer and were made to believe that they were communicating with the other group members. In reality, there was no interaction. The procedure of the study was quite similar to Study 4.1, except for the fact that the entire experiment was in Dutch.

Diversity manipulation. Perceived diversity was again manipulated by providing the same false feedback about personality as in Study 4.1. To strengthen this manipulation and to make the bogus group setting more realistic, participants were also presented with a graphical display of the disposition of personalities within a "personality rose" (without labels). Within the *homogenous condition* all group members were depicted in the same quarter of the rose. Within the *heterogeneous condition* all group members were depicted in a different quarter of the rose. This time, directly after the manipulation, we asked manipulation check questions: two items measuring to what extent participants thought personalities of group members were different, and similar (r = -.894, p < .001).

Social identity formation manipulation. The manipulation of social identity formation was very similar to the manipulation in Study 4.1. This time, we strengthened the manipulation and the reality of the group, by letting participants compare their coat of arms with a coat of arms that supposedly belonged to the previous group.

The manipulation was followed directly by a manipulation check, measuring the extent to which the unique coat of arms was generated by the computer (deduction check) and the extent to which participants made an individual contribution to the coat of arms (induction check). These items did not correlate and were used as separate checks, r = -.097, p < .401). Furthermore, identification and entitativity were measured (see dependent variables).

Norm establishment. After participants filled in the questionnaire, we established an *explicit group norm* in order to assess divergence from that norm later on. Therefore, we selected a topic on which Dutch students' attitudes were clear and outspoken: In September 2012, the Dutch government implemented a new law that students who studied longer than 6 years at university would be fined. This measure was strongly opposed by student groups: students thought that it was unjust for the policy to ignore personal circumstances which could cause delays[18].

Participants were asked their personal opinion about this topic. Except for two participants, all agreed with the statement "When giving the fine personal circumstances of a student should be taken into account" (*M*

[18] A pilot study (N = 23) measuring agreement with two statements (1 = *absolutely disagree*; 6= *absolutely agree*) confirmed that most students were against a fine for all students with a year study delay. On average participants disagreed with the statement "All students who have more than one year graduation delay should pay a fine", with 69.6 percent scoring below the midpoint of the scale. Even stronger, *all* participants agreed with the statement "When giving the fine personal circumstances of a student should be taken into account" (M = 5.78 , SD = 0.42, Min. = 5.00). Because there was more consensus about the last statement, we used this statement as our explicit group norm.

= 3.76, *SD* = 0.54, 1 = *absolutely disagree*; 4= *absolutely agree*). In order to assess divergence from the norm later on, we excluded the two participants who personally disagreed with the statement from our analyses.

Consensus was highlighted by telling participants that 92% of all students disagreed with the fine. Furthermore, participants were made to believe that also within their discussion group, there was consensus on the topic. Then, participants were asked to communicate their opinion to the other group members in two consecutive rounds. The pre-written statements of the other group members displayed a strongly negative attitude towards the fine (e.g. "this rule is ridiculous"). Together, this established an explicit group norm that personal circumstances of students should be taken into account when giving a fee.

Argument generation. After the establishment of an explicit group norm, participants were asked to generate as many pro- and contra-arguments in three minutes regarding the implementation to have all students pay the same fine, no matter personal circumstances. They were told these arguments would be presented to the other group members, in order to discuss them together.

Next, participants were asked to think about the possible functions of a brick in 1.5 minutes (adapted from Guilford, 1967; Lamm & Trommsdorff, 1973), and to fill in a second questionnaire, before the group discussion would start. In fact, after they filled in the questionnaires the experiment ended.

Dependent variables. Again, all measures could be answered on a 7-point Likert scale (1= *absolutely not*, to 7 = *absolutely*), unless otherwise specified.

Identification and Entitativity. We used the same measures of identification and entitativity as in Study 4.1, except these variables were

measured at two time points. The first measure was taken directly after the manipulation ($\alpha_{Identification}$ = .932, and $\alpha_{entitativity}$ = .866), and the second measure was taken after the idea generation task ($\alpha_{Identification}$ = .938 and $\alpha_{Entitativity}$ = .882).

Normative outcomes. The number of norm-inconsistent arguments was used as a measure of norm deviance. Thereby, two independent coders counted the number of norm-consistent (r = .974, p < .001) and inconsistent arguments (r = .928, p < .001), separately. The number of norm-consistent and norm-inconsistent arguments did not correlate (r = -.011, p = .921).

Results

Manipulation checks. In Study 4.2, the manipulations seemed to work. Diversity had a significant effect on the diversity check, $F(1,75)$ = 144.53, p < .001, η^2 = .66. As expected, participants reported the personalities in the group to differ more from each other in the heterogeneous condition (M = 5.78, SD = 1.16), than in the homogeneous condition (M = 2.28, SD = 1.39).

Moreover, a MANOVA with social identity formation and diversity as predictors, showed that social identity formation had a significant effect on the induction check, $F(1,73)$ = 19.25, p < .001, η^2 = .21, and a marginally significant effect on the deduction check, $F(1,73)$ = 3.93, p = .051, η^2 = .05, in the expected directions. Participants in the induction condition scored higher on the induction check (M = 5.17, SD = 1.43) and lower on the deduction check (M = 5.15, SD = 1.35), than participants in the deduction condition (M = 3.61, SD = 1.66, and M = 5.78, SD = 1.44, respectively).

All other effects on the induction and deduction check were not significant (F's < 0.35).

Identification. Because identification was measured before and after idea generation, we carried out GLM analyses adding time as within-subject factor. We found a marginally significant effect of diversity on identification, $F(1,73) = 2.92$, $p = .092$, $\eta^2 = .04$, which was qualified by a significant interaction with social identity formation, $F(1,73) = 10.13$, $p = .002$, $\eta^2 = .12$. As expected, members of heterogeneous groups identified somewhat more with their group when the group identity was induced rather than deduced, $F(1,73) = 3.49$, $p = .066$, $\eta^2 = .05$. For members of homogenous groups, the effect was in the opposite direction, $F(1,73) = 6.89$, $p = .011$, $\eta^2 = .09$ (see Figure 4.3).

Time of measurement also had a significant effect on identification, $F(1,73) = 10.25$, $p = .002$, $\eta^2 = .12$, and this was further qualified by a significant interaction with diversity, $F(1,73) = 6.01$, $p = .017$, $\eta^2 = .08$. Identification significantly increased between the two time points for heterogeneous groups, $\Delta M = 0.35$, $p < .001$, but not for homogenous groups, $\Delta M = 0.05$, $p = .601$.

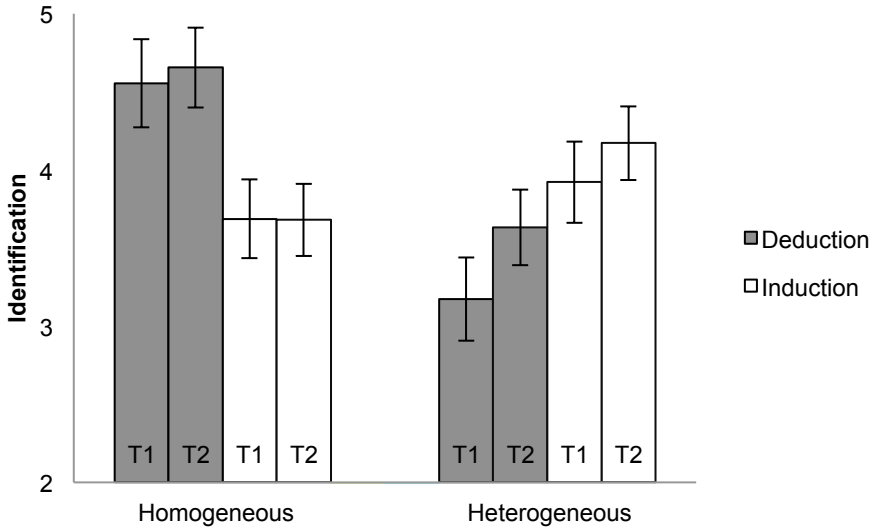

Figure 4.3. Interaction effect of time (T), diversity, and social identity formation on average identification in Study 4.2, with standard errors.

Entitativity. The results for entitativity were similar as those found for identification. Diversity had a significant effect on entitativity, $F(1,73) = 5.50$, $p = .022$, $\eta^2 = .07$, and there was a significant interaction between diversity and social identity formation, $F(1,73) = 12.68$, $p < .001$, $\eta^2 = .15$, on entitativity. As expected, members of heterogeneous groups perceived the group somewhat more as an entity when the group identity was induced rather than deduced, $F(1,73) = 2.91$, $p = .092$, $\eta^2 = .04$. For members of homogenous groups, the effect was in the opposite direction, $F(1,73) = 10.99$, $p < .001$, $\eta^2 = .13$ (see Figure 4.4). They perceived the group more as an entity in the deduction condition than in the induction condition.

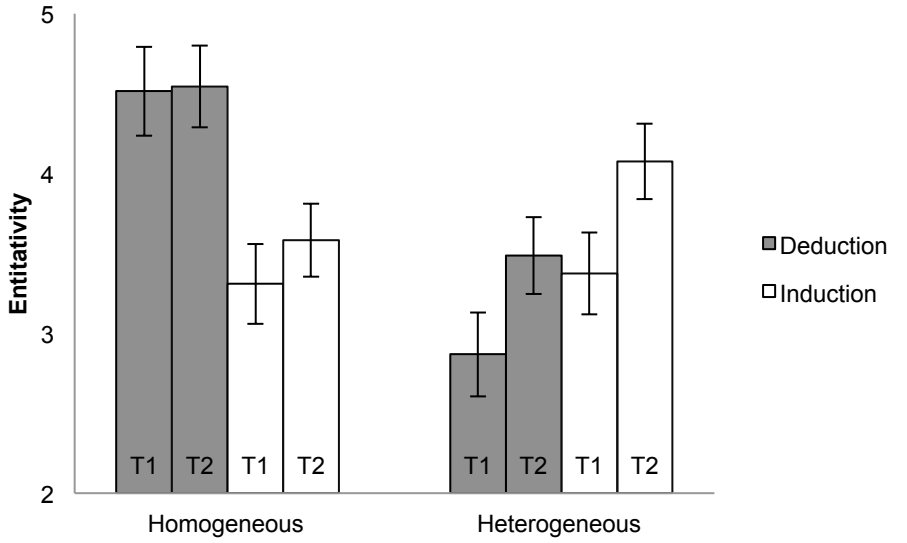

Figure 4.4. Interaction effect of time (T), diversity, and social identity formation on average entitativity in Study 4.2, with standard errors.

Time of measurement also had a significant effect on entitativity, $F(1,73) = 15.22$, $p < .001$, $\eta^2 = .17$, which was qualified by a significant interaction with diversity, $F(1,73) = 5.96$, $p = .017$, $\eta^2 = .08$. Entitativity significantly increased between the two time points for heterogeneous groups, $\Delta M = .66$, $p < .001$, but not for homogenous groups, $\Delta M = .15$, $p < .310$.

Normative outcomes. Participants had three minutes to generate arguments. In line with the explicit group norm, and participants private opinions considerably more norm-consistent arguments ($M = 2.18$, $SD = 1.20$) than norm-inconsistent arguments ($M = 1.63$, $SD = 0.78$) were generated, $F(1,73) = 11.30$, $p = .001$, $\eta^2 = .13$.

Norm-inconsistent arguments. The interaction effect of diversity and social identity formation on norm-inconsistent arguments was not significant, $F(1,73) = 2.59$, $p = .112$, $\eta^2 = .034$. The cross over pattern did seem to match that of Study 4.1 (see Figure 4.5). The data revealed a trend: participants in the heterogeneous condition seemed to generate slightly more norm-inconsistent arguments, when identity was formed inductively, rather than deductively, $F(1,73) = 1.53$, $p = .220$, $\eta^2 = .02$. As before, this pattern was reversed (again slightly) for participants in the homogenous condition, $F(1,73) = 1.09$, $p = .301$, $\eta^2 = .02$.

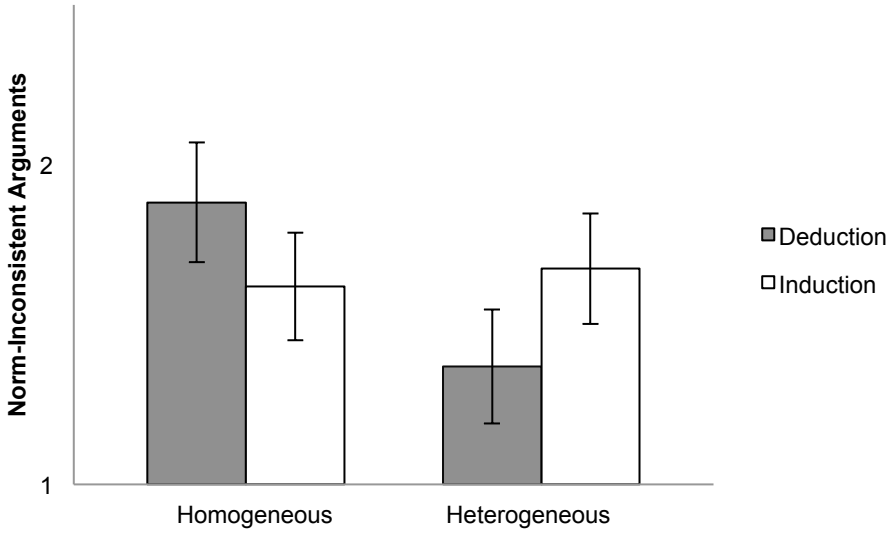

Figure 4.5. Interaction effect of diversity, and social identity formation on number of norm-inconsistent arguments in Study 4.2, with error bars.

Norm-consistent arguments. Diversity had a significant effect on the number of norm-consistent arguments generated, $F(1,73) = 4.93$, $p = .029$, $\eta^2 = .06$. This time, more norm-consistent ideas were generated in heterogeneous groups, than in homogenous groups (See Figure 4.6). All other effects were non-significant, *F's* < 0.60. The pattern of results appeared to be opposite to the results in Study 4.1. Participants in heterogeneous groups that inductively formed a social identity appeared the *most* likely to generate norm-consistent arguments, whereas participants within the homogeneous groups that deductively formed a social identity appeared the *least* likely to generate norm-consistent arguments.

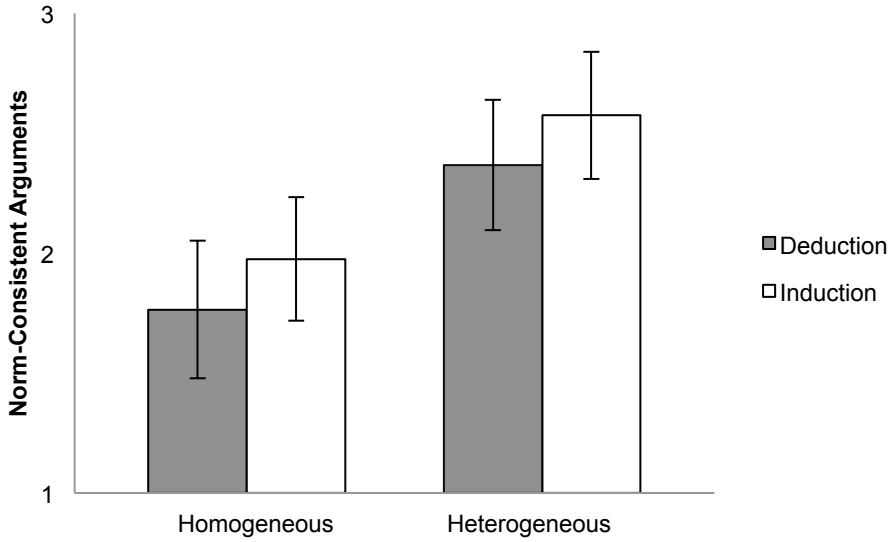

Figure 4.6. Interaction effect of diversity, and social identity formation on number of norm-consistent arguments in Study 4.2, with error bars.

Discussion

The results of Study 4.2 replicated previously found effects of social identity formation and diversity on identification (and entitativity; Jans et al., 2012). While participants in groups perceived to be homogenous can form a stronger social identity through deductive processes, participants in groups perceived to be heterogeneous formed a stronger social identity inductively, as reflected by higher identification and entitativity.

However, compared to Study 4.1, the effects on norm-inconsistent arguments were less clear, and not significant. The pattern of results did suggest that deviance was higher in heterogeneous groups when identity was induced, instead of deduced. However, unexpectedly the pattern of results also suggested that participants in homogeneous groups generated more norm-inconsistent arguments when social identity was deductively formed than when social identity was inductively formed. Furthermore, participants in the heterogeneous/induction condition generated the most norm-consistent arguments.

Post hoc, there are several possibilities why the effects on argument generation in Study 4.2 were not as clear-cut as in Study 4.1. For example, participants had far less time to generate arguments, and the explicit group norm was much clearer. However, we believe that there was one important difference in particular that may explain the different pattern of results: the established group norm in this study was opposite to the attitude of an outgroup (the Government). This means that group members who have distinctive (pro-outgroup) ideas need to perform a balancing act of showing some allegiance to the in-group whilst displaying their independent ideas. This may explain why in this context, in heterogeneous groups there were more norm-consistent ideas: these are overt displays of ingroup support. In

other words, going against group norms was less harmless for the group and one's membership, than it was in Study 4.1.

Meta-Analysis

Although not all results were statistically significant in both studies, the pattern of results appeared quite similar, except for the results on norm-consistent arguments. In order to better assess the underlying strength of the effects, we conducted a meta-analysis calculating average effect sizes across studies.

Identification

We aggregated identification after argument generation (i.e., at T2 in Study 4.2) as these were measured at identical time points. Across studies, the interaction of diversity and social identity formation had on average a moderately large effect on identification, $\eta^2 = .06$, $Z = 2.81$, $p = .002$. The simple main effects of social identity formation within the conditions of diversity were also significant over studies. Within the heterogeneous conditions, participants on average identified more strongly with their group when the social identity was induced, instead of deduced, $d = .56$, $Z = 2.14$, $p = .016$. This pattern significantly reversed within the homogeneous conditions, although the effect was slightly smaller, $d = -.43$, $Z = -1.77$, $p = .039$.

Entitativity

Across studies, the average interaction effect of diversity and social identity formation on entitativity was significant, $\eta^2 = .02$, $Z = 1.82$, $p = .034$. However, the simple main effect of social identity formation was not

significant within the heterogeneous conditions, $d = .20$, $Z = 0.99$, $p = .162$, and only marginally significant within the homogeneous conditions, $d = -.35$, $Z = -1.50$, $p = .067$.

Norm-Inconsistent Arguments

Average effect sizes were calculated on the basis of the log-transformed measure of Study 4.1 in view of the skewedness of this data. The average interaction effect of diversity and social identity formation on norm-inconsistent arguments was moderately large, $\eta^2 = .07$, $Z = 2.82$, $p = .002$. Within the heterogeneous conditions, participants on average came up with more norm-inconsistent arguments when the social identity was induced, instead of deduced—a moderate size effect, $d = .56$, $Z = 2.06$, $p = .019$. The pattern was significantly reversed within the homogenous conditions, $d = -.52$, $Z = -1.81$, $p = .034$.

Norm-Consistent Arguments

Across studies, the average effect of diversity was not significant, $\eta^2 = .00$, $Z = 0.31$, $p = .377$, nor was the effect of social identity formation, $\eta^2 = .01$, $Z = -0.64$, $p = .263$.

General Discussion

In this paper, we aimed to replicate and extend the work on the interplay of individuality and social identity formation, by testing whether inductive social identity formation does not only allow for the incorporation of within-group differences in the emergent shared identity, but also provides group members more leeway to continue expressing themselves in distinctive ways.

First, the two studies in combination replicated previous found effects of social identity formation and perceived diversity on identification and entitativity (Jans et al. 2012). While individuals in groups perceived to be homogeneous can form a stronger social identity through deductive processes, than though inductive processes, this is reversed for individuals in perceived heterogonous groups, as indicated by higher identification (and entitativity). Within groups perceived to be heterogeneous, inductive processes foster the formation of a social identity. This supports the suggestion that within-group differences do not need to obstruct social identity formation, confirming that induction is a pathway to social identity formation with characteristics very different from deduction based on overarching similarities (cf. Turner, 1985).

Second, our research shows that individuals in groups perceived to be heterogeneous generate more norm-inconsistent arguments when social identity was inductively formed. This suggests that individuality may not only be the "input" for social identity formation (Jans et al., 2012), but that in situations where diversity is perceived to be at the basis of group formation, the display of individuality can also be the "output" behaviour of group members. Through inductive processes of social identity formation, individuality and social identity can thus become mutually reinforcing.

We suggested that this was because the norms created through inductive social identity formation may be interpreted quite differently: as organically emergent rather than pre-fixed and given. This fits with the distinction between cultures that are "tight"—have strong norms and a low tolerance of deviant behaviour— and cultures that are "loose"—have weak norms and a high tolerance of deviant behaviour (Gelfand et al, 2011; Pelto, 1968). Just as cultures may differ in their tightness-looseness, groups may

also differ in their tolerance for individuality. We studied this assumption indirectly by looking at the number of norm-inconsistent arguments group members generated. Future research could begin to explore whether group members are actually conscious of group norms being more or less tight, and whether group members are also more tolerant of other's deviant behaviours when social identity is inductively formed.

An alternative explanation for why inductive social identity formation can foster norm deviance in heterogeneous groups is that heterogeneity itself became the "norm" (cf. Homan, Van Knippenberg, Van Kleef, & De Dreu, 2007; Luijters, Van der Zee, & Otten, 2008; Rink & Ellemers, 2007). In other words, inductive groups simply develop a norm that encourages independence from existing norms. This alternative explanation fits with the suggestion in self-categorization theory, that when social identity is salient, group members will internalize group norms and conform their behaviour in line with such norms (Turner, 1991; Hogg & Turner, 1987). However, this alternative explanation strikes us as unlikely. There were no significant associations between identification and deviance in the inductive-heterogeneous conditions of either study: it were not the high identifiers who were responsible for these effects. Similarly, Study 4.2 showed that in contexts in which the ingroup norm conflicted with an outgroup norm, members of inductive-heterogeneous listed numerous norm-consistent ideas too: they made sure that they balanced their independence from the group norm by simultaneously displaying adherence to it.

In sum, our results extend self-categorization's suggestion that group members will conform their behaviour in line with group norms as an expression of social identity (Turner, 1991; Hogg & Turner, 1987). Individuals were expressing more norm-inconsistent arguments in those

instances in which social identity was strongest. This suggests that social identity may in general be more positively related to norm-deviance than has hitherto been assumed (see also Hornsey, 2006; Packer, 2008). We believe that it is likely this would take on two distinct forms. Within homogeneous groups with a strongly deductive social identity, high identifiers and central group members may experience enough psychological safety to go against group norms (Edmondson, 1999; Paulus & Dzindolet, 2008) and/or may make strategic choices to do so (Packer 2011; Morton et al., 2007). Within heterogeneous groups with induced social identity, however, all group members might feel more secure in expressing their own viewpoints: because similarity and unanimity is no longer at the foundation of group unity, deviance is less of a threat to the individual and the group.

Our results may have important implications for the possibility of benefitting from diversity in groups. Heterogeneous groups have the potential to outperform homogenous groups, as they may possess a broader range of task-relevant knowledge, skills, abilities, opinions and perspectives that are distinct and non-redundant (Williams & O'Reilly, 1998). However, whether heterogonous groups fulfil this potential depends on the extent to which group members also elaborate on these differences (Van Knippenberg, De Dreu, & Homan, 2004). In other words, group members need to share their unique knowledge and perspectives within the group, and integrate them into a group product (Van Knippenberg, & Van Ginkel, 2010). As inductive social identity formation allows group members to create a shared identity, without giving up their mutual differences, it may create the possibilities for heterogeneous groups to benefit from their diversity and become more creative.

Conclusion

Identity as an individual and identity as a group member seem to be largely interdependent. Where strong groups can arise out of the individuality of its members, so can expressions of individuality be the consequence of strong groups and group memberships. Paradoxically, the individual and the group might therefore exist, in part, because of each other.

Chapter 5

GROUP-BEING, GROUP-DOING, AND SOCIAL IDENTITY FORMATION [19]

[19] Chapter 5 is based on: Jans, L., Leach, C. W., Garcia, R., & Postmes, T. (2013). *A multi-level approach to the emergence of identification in newly formed groups: Differential effects of "group-being" and "group-doing"*. Soon to be submitted.

Individuals differ in how strongly they identify with in-groups. The strength of an individual's in-group identification has important implications for the self-concept, relations with others, and social behaviour (for reviews, see Ashmore, Deaux, & McLaughlin-Volpe, 2004; Ellemers, Spears, & Doosje, 1999). Despite the widespread assumption that individuals' identification with in-groups is at least partly a function of group-level processes, most research focuses on identification at the individual level of analysis (for reviews, see Ashmore et al., 2004; Ellemers et al., 1999; Haslam, Turner, Oakes, McGarty, & Reynolds, 1997). That is, researchers distinguish higher identifiers from lower identifiers, without examining how the group influences the identification of its members. Yet some groups encourage higher identification than others, and individuals within a particular in-group may identify to a more similar degree than individuals in other in-groups. These group-level processes cannot be examined at the individual level of analysis; they must be examined by making comparisons between different groups.

In this paper, we make novel use of a multi-level modelling statistical approach to study between- and within-group emergence of identification in newly formed groups. We first distinguish two dimensions of identification, then formulate hypotheses for how these dimensions emerge in newly formed groups, and finally outline our multi-level approach to studying this process.

The Emergence of In-Group Identification

Individuals' identification with in-groups is multi-dimensional (for a review, see Ashmore et al., 2004). Leach et al. (2008) distinguished two dimensions of in-group identification: self-definition and self-investment. *Self-definition* refers to the extent to which individuals perceive themselves and other in-group members as a category (Turner, 1982). This dimension is reflected in two components: individuals' self-stereotyping as a typical group member and perceiving the in-group as homogenous. *Self-investment* refers to individuals' psychological investment in the in-group (Tajfel, 1978a). This is expressed in three components: a sense of solidarity with group members, feeling satisfied about one's group membership, and seeing the in-group as central to the self. These two dimensions echo other distinctions made in the social sciences, such as the distinction between mechanical and organic solidarity (Durkheim, 1893/1984), *gemeinschaft* and *gesselschaft* (Toennies, 1887/1988), and common identity and common bond groups (Prentice, Miller, & Lightdale, 1994).

Recent research has shown that the self-definition and self-investment dimensions of in-group identification are empirically distinct and perform distinct roles in individuals' experience of in-group membership (e.g., Crane & Platow, 2010; Leach, Rodriquez Mosquera, Vliek, & Hirt, 2010; Leach et al., 2008; Shepherd, Spears, & Manstead, 2013). However, past research has only considered within-group (individual-level) differences between the dimensions of in-group identification. In this paper, we are interested in whether the two dimensions can also be empirically distinguished at the group level of analysis. We do so by studying the emergence of in-group influence on identification with newly formed groups. As we explain below, there is

good reason to expect that the group differentially influences self-definition and self-investment in newly formed groups.

Self-Definition as a Function of Group-Being

Groups are self-defining to the extent that individuals' self-perception is shaped by their group membership (Leach et al., 2008). A high degree of self-definition is reflected in depersonalized perceptions of group members (in-group homogeneity) and depersonalized perceptions of the self (self-stereotyping, see Turner, Hogg, Oakes, Reicher, & Wetherell, 1987). A logical precondition for such depersonalized perceptions is that group members have a clear perception of what the group *is* (Leach & Vliek, 2008; Postmes, Haslam, & Swaab, 2005a). From the moment a group is formed, some groups form a clearer entity than other groups (for example because they are more homogeneous or more distinctive; Arrow, McGrath, & Berhdahl, 2000; Lickel et al., 2000). Therefore, some groups should foster higher self-definition than other groups.

Self-definition and its consequences are typically studied in social categories such as gender or ethnicity. But the process is also observed in zero-history "minimal groups" that allow little or no interaction. Thus, it appears that in existing categories and in newly formed groups alike, the mere fact of belonging to a group can already shape individual members' perceptions of self and other group members. In other words, processes of self-definition may occur from the moment a group is formed, as a result of the simple fact of "group-being" – the existence of the group as a social entity. Thus, no actual interaction within a group – "group-doing" – should be necessary for the in-group to influence members' self-definition in terms of the group.

To illustrate this, Figure 5.1 depicts various conceivable pathways by which group influence on in-group identification emerges. The graph depicts developments in individual-level (within-group) variation and group-level (between-group) variation over time, as groups interact. We predict that there should be between-group differences in self-definition from the moment groups are formed, and that increasing interaction should have little effect on these perceptions of the group as an entity (i.e., Figure 5.1a).

Self-Investment as a Function of Group-Doing

Self-investment is anchored in a different set of social-psychological processes than self-definition. Thus, self-definition can be independent of self-investment, to some extent. The independence of self-investment and self-definition should be clearest in newly formed groups: The mere fact of the group's existence (group-being) should not provide a solid basis for collective investment in the group. Without shared experience in the group, members' feelings of solidarity and of satisfaction with the group should be largely independent of each other. In newly formed groups, in other words, members of the group should not agree with each other about the *value* of that group membership to the self. That changes when members gain some common experience with the in-group. Indeed, research shows that shared experiences of group membership emerge out of direct interaction in small groups (see Kerr, Aronoff, & Messé, 2000; Postmes et al., 2005a).

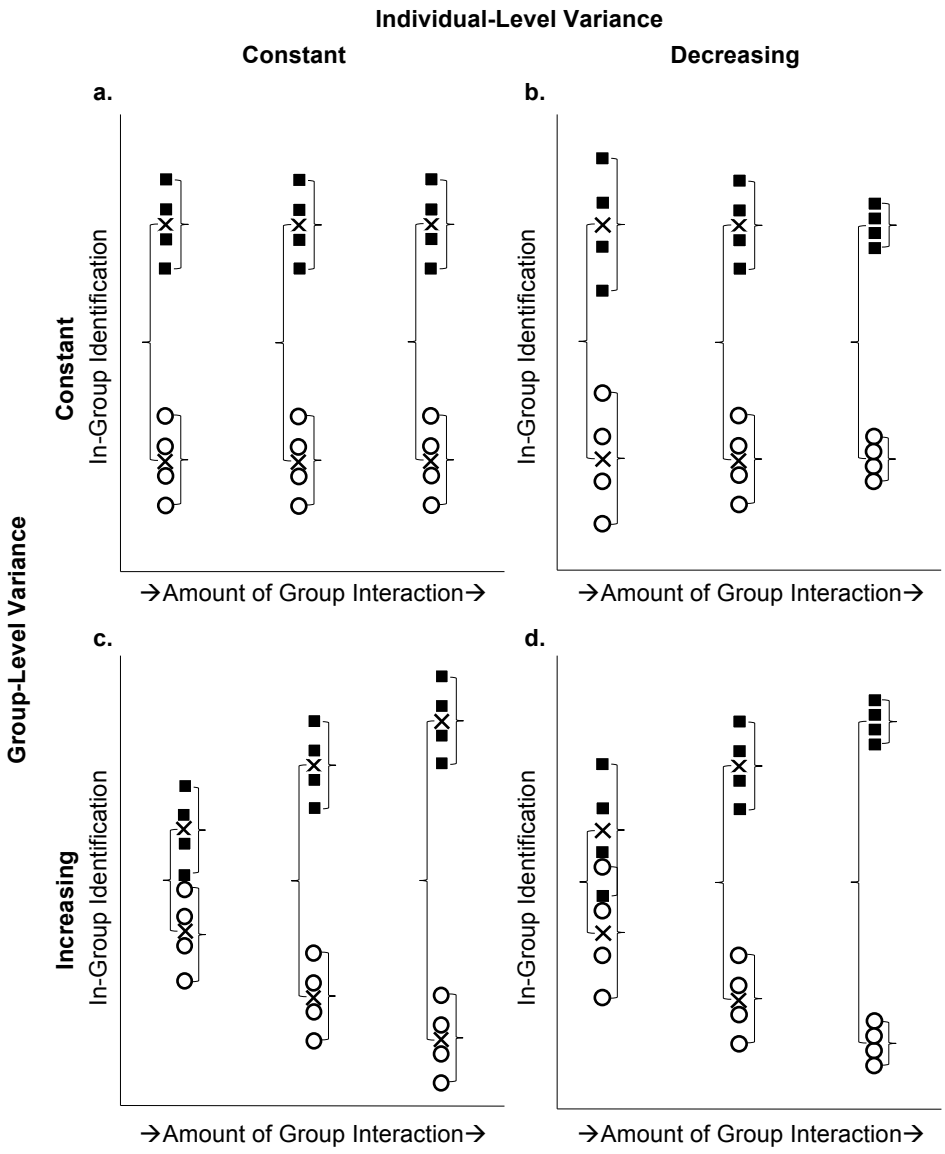

Figure 5.1a-d. The emergence of two group-level properties of in-group identification with greater group interaction: decreasing individual-level variance and increasing group-level variance. Group 1 is represented by squares, and group 2 is represented by circles. The group mean is represented by x. The left brackets indicate group-level variance whereas the right brackets indicate individual-level variance.

We thus expect that group-level influences on self-investment emerge out of direct interactions within the group: "group-doing". This can take two forms. First, through interaction each group acquires its own peculiarities (such as: norms or styles of interaction, see Postmes, Spears, & Lea, 2002; Sherif, 1935). For example, some groups will be friendly or efficient whereas other groups will be unfriendly and inefficient. Thus, with increased interaction, groups should increasingly differ from each other. These between-group differences should influence the extent to which they invite members' self-investment in the group (see Figure 5.1c). Over time, some groups will therefore be characterized by greater solidarity and satisfaction and others will be characterized by lesser solidarity and satisfaction. Second, through direct interaction, group members share and "elaborate" the experience of being a group member (Arrow et al., 2000; Van Knippenberg, De Dreu, & Homan, 2004). Thereby, they should develop a collective basis for satisfaction and solidarity with their in-group. Thus, through direct interaction, in-group members' self-investment should become more alike (see Figure 5.1b).

In sum, we expect that in newly formed groups, self-definition and self-investment emerge in distinct ways. The simple fact of group-being should be enough for the group to influence members' self-definition in terms of their group membership. In contrast, self-investment in the group should emerge through group-doing.

Prior Research

Many scholars have suggested that individual members are influenced by their in-group and by group characteristics such as size or status (e.g., Deaux & Martin, 2003; Ellemers et al., 1999; Tajfel & Turner, 1979; Turner et al., 1987). This means that within-group and between-group differences in identification should be considered in conjunction with each other. One can achieve this in a multi-level analysis (e.g., Bliese, 2000) in which individual identification is nested within groups. Conceptually many have argued that group processes necessitate such an approach (e.g., Arrow et al., 2000), but with respect to group identification, our literature search suggests that researchers have rarely studied it in a multi-level analysis.

The social identity literature has focused mainly on individual-level differences in identification. However, we know that group-level factors can influence individual-level identification (e.g., group size and status, see Brewer, 1991; Ellemers, Van Knippenberg, De Vries, & Wilke, 1988). Although there are many studies of individuals nested within teams in the organizational literature, there is a tendency to choose either an individual-level or a group-level analytic strategy (Bliese, 2000). With respect to studies of identification it appears to be quite common to examine identification with multiple groups such as team and organization at the individual level (e.g., Riketta & Van Dick, 2005). Although no studies known to us adopt a multi-level approach to studying the emergence of in-group identification in the manner we pursue, there is one prior study that has examined the emergence of identification in groups (Bouas & Arrow, 1996). Our predictions are consistent with that prior work, but our methods differ because we adopt a multi-level approach and use a validated multi-dimensional identification scale.

Present Research

This paper examines the influence of the group on in-group identification. We take a multi-level approach to assess group influence on the self-definition and self-investment dimensions of identification among individuals who are nested in small groups. We predict that we will replicate the two-dimensional factor structure of Leach et al (2008) at both the individual and the group levels of analysis. With respect to the emergence of in-group identification, we expect that the self-definition and self-investment dimensions will emerge differently.

Group-Level Effects

In a multi-level approach, in-group identification at the group level refers to the part of individuals' identification that is influenced by the particular group to which the individual belongs. As indicated above, we expect that at this group level, the two dimensions of in-group identification emerge differently. Self-definition should emerge out of group-being, even with little interaction. In a multi-level analysis, this is shown in the existence of group-level variance whereby some groups have higher self-definition than other groups (Figure 5.1a). In contrast, self-investment should emerge out of group-doing. As explained above, with increased interaction, groups should become more different from each other in their degree of self-investment, leading to increased group-level variance (Figure 5.1c).

Individual-Level Effects

In a multi-level approach, in-group identification at the individual level is solely based on the individual and his or her personal representation of the group (for general discussions, see Bliese, 2000; Kenny, Kashy, & Bolger, 1998). Thus at the individual level, identification is independent of the group and of other group members, and reflects group members' idiosyncratic representations of their in-group. Such individual-level variation in identification is likely to be quite large with actual or anticipated groups (Amiot, De la Sablonnière, Terry, & Smith, 2007, Turner et al., 1987). For example, research shows that individuals' in-group identification is partly anchored in personal self-perceptions (Otten & Epstude, 2006; Van Veelen, Otten, & Hansen, 2011).

As explained above, we predict that group interaction should reduce such individual-level differences in self-investment. With increased interaction, group members should become more similar in their self-investment. The emergence of this group-level property is shown empirically in decreased individual-level variance (see Figure 5.1b). Putting group- and individual-level predictions for self-investment together, we expect group interaction to result in both increased variance at the group level and decreased variance at the individual level (see Figure 5.1d).

Overview

We analysed in-group identification data collected in three small group studies that, between them, varied in the amount of interaction within the group.[20] In all three studies individuals were randomly assigned to small groups. After completing a group task involving limited to extensive interaction, identification was measured with Leach et al.'s (2008) multi-component scale.

All three studies examined groups formed solely for the purpose of the experiment. Study 5.1 allowed only minimal interaction. Participants did not work together, face-to-face, on a task, but were able to send sparse interaction via an asynchronous on-line communication system. Although this sort of computer-mediated communication allows only limited asynchronous interaction, past research shows that identification with this sort of on-line group can be quite high (Bouas & Arrow, 1996; Postmes, Spears, & Lea, 1998). Study 5.2 had greater interaction in face-to-face groups. Participants interacted face-to-face for ten minutes. Study 5.3 used the same task as Study 5.2, but after completion of this task, participants completed another ten-minute face-to-face task. Thus, the amount of face-to-face interaction in the small groups to which participants were assigned was twice that in Study 5.2.

To test our hypotheses we compared individual- and group-level properties of self-definition and self-investment across studies with a Multi-

[20] The primary purpose of these studies was to examine the effects of the nature of the interaction on group outcomes and on mean-level self-investment. Importantly for the present paper is that although the nature of the interaction may have varied, the amount of interaction was identical for each condition. Important for the present analyses, too, is that we carried out Multi-group Multi-level CFAs to check if the differences between condition would qualify the results that we focus on in the present paper. This analysis showed that differences between conditions were independent of the effects reported here. The between-condition differences in Study 5.3 of the present paper are reported in detail in another paper (see Jans, Postmes, & van der Zee, 2012). Study 5.1 and 5.2 are currently unpublished data.

Group (between-studies) Multi-level Confirmatory Factor Analysis (Muthén & Muthén, 1998-2010) that specified Leach et al.'s (2008) two-dimensional model of in-group identification at the individual and the group level[21]. The results of the three studies were compared in a multi-group analysis. In this way, we could examine how the amount of interaction allowed in each study affected the emergence of group influences on the two dimensions of in-group identification. We make formal comparisons across studies to test our hypotheses about the emergence of self-definition and self-investment with increased interaction, after reporting group influence on in-group identification in all three studies.

Method

We examined identification with small groups in three studies that varied in their possibility for interaction. Study 5.1 required only minimal on-line discussion, whereas Study 5.2 required work on a task face-to-face, and Study 5.3 required work on two such tasks. In all three studies, individuals were randomly assigned to small groups and identification with these small groups was measured. In all studies, participants were recruited in exchange for course credits.

[21] The hierarchical model of in-group identification by Leach et al. (2008) specifies a third component of self-investment: The extent to which the group is a central aspect of someone's self-concept. This component is not taken into account in the current research, because we expected a floor effect of centrality in newly formed groups. To illustrate the conceptual point's practical implications: We considered questions such as "this group is central to who I am" to be somewhat unrealistic and therefore unlikely to generate meaningful and interpretable responses from members of newly formed groups. We therefore decided not to measure this dimension.

Study 5.1

In Study 5.1, First-year university students (N = 140) were randomly assigned to 28 different five-person on-line discussion groups.[22] Each member was assigned a number and a colour that represented them on-line. Participants were asked to introduce themselves to each other by posting at least three messages in the first four days of the study. In these posts, participants typically wrote about their characteristics, such as where they lived, what their hobbies were, and what their strengths were. Typical posts were: "I am 18 years old, and I am sharing a house with another student, I like to go out and play hockey, I am studying psychology and I would like to work with children"; "I am really spontaneous and I like to please people"; "I have a Facebook account, just as the other group members. But in contrast to the others I am not religious." Five participants did not post any messages and thus their data was excluded from analyses. The remaining participants (N = 135, 17 men, 117 women, 1 unknown, M_{age} = 19.16) posted an average of 3.13 messages (SD = 0.88, range =1-5). The average message consisted of 64 words.

After the four days of acquaintance, participants were sent an on-line questionnaire measuring, among other things, their identification with their group. Eleven items were adapted from Leach et al. (2008) to assess four components of group identification: individual self-stereotyping, in-group homogeneity, solidarity, and satisfaction. For example, an individual

[22] Groups were randomly assigned to a common characteristics vs. an individual characteristics condition, where they were asked to discuss either the common or individual characteristics within the group. Comparisons between Multi-group Multi-level CFAs did not provide any evidence for differences in variances across condition. A model in which we constrained all variances and covariances to be equal across condition did not significantly decrease model fit, in comparison to a baseline model in which we did not constrain any of the factor (co)variances to be equal across condition, $\Delta\chi^2$ (6) = 8.651, p = .194. An equally good fitting constrained model indicates that there is little difference in the factor variance across conditions.

self-stereotyping item stated "I am similar to the average member of this group", and an in-group homogeneity item stated "Members of this group have a lot in common with each other." A satisfaction item stated "I am glad to be in this group", and a solidarity item stated: "I feel solidarity with this group." Responses were given on a six-point scale that ranged from 1 (*completely disagree*) to 6 (*completely agree*). In the other studies a more standard seven-point scale was used. Therefore, the present responses were converted to a seven-point scale for analysis.

Study 5.2

Study 5.2 built on Study 5.1 by increasing the degree of interaction. University students (134 women, 37 men) were randomly assigned to 55 different three-person groups.[23] Participants were seated around a table and interacted in a group task in which they had to make a team shirt. They had approximately 10 minutes to finish the task. Afterwards, participants completed questionnaires, measuring their identification with the group (see Study 5.1), among other things. Responses were given on seven-point scales that ranged from 1 (*completely disagree*) to 7 (*completely agree*). The data of two groups were deleted, because its members' identification scores were significant (multivariate) outliers on Mahalanobis distance ($p < .001$).

[23] Groups were randomly assigned to a 2 (Diversity: Homogenous vs. Heterogeneous personalities) x 2 (Social Identity Formation: Deductive vs. Inductive) design. Participants were told that group members had either very similar or very different personalities. In deductive group formation, members were given a team logo whereas in the inductive group formation each member contributed to the design of a logo. Again, a comparison between the baseline model and the fully constrained model did not provide any evidence for differences in variances across condition, $\Delta\chi^2 (18) = 17.399$, $p = .496$.

Study 5.3

Study 5.3 was very similar in design to Study 5.2, but allowed for twice as much interaction. University students (115 women, 40 men; M_{age} = 20.26) were randomly assigned to 39 different four-person groups.[24] They were seated around a table, and interacted in two group tasks. The first task was the same ten-minute task used in Study 5.2. In a second task, participants interacted an additional ten minutes to build a house of Lego blocks. Afterwards, participants completed questionnaires measuring identification with their group among other things. Responses were given on seven-point scales (1 = *completely disagree*; 7 = *completely agree*). One participant was deleted from analyses because he had already participated in an earlier session of the study.

Analyses

MPlus 4.21 (Muthén & Muthén, 1998-2010) was used to perform a Multi-group (between-studies) Multi-level Confirmatory Factor Analysis (CFA) that specified the two-dimensional model of in-group identification (Leach et al., 2008) at both the individual (Level 1) and the group level (Level 2). In the model, the individual self-stereotyping and in-group homogeneity components loaded on a self-definition factor, and the solidarity and satisfaction components loaded on a self-investment factor. We used scale scores for each of the components, to minimize the number of estimated parameters at the group level, relative to *N* groups. The items at the group level are represented by ovals in Figure 5.2a, because they are

[24] Groups were randomly assigned to a 2 (Diversity: Homogenous vs. Heterogeneous personalities) x 2 (Social Identity Formation: Deductive vs. Inductive) design parallel to that of Study 2. Again, a comparison between the baseline model and the fully constrained model did not provide any evidence for differences in variances across condition, $\Delta\chi^2$ (18) = 13.210, p = .779.

the latent variables (i.e., group intercepts) and not the measured variables. Additionally, the model was specified in two ways that ensured measurement equivalence across studies and across the individual and the group levels (see Figure 5.2a) and reduced the model's complexity. First, all the item loadings for all factors were fixed to 1 at both levels. In this way we forced every item to have an equivalent loading on its expected factor. Second, the item error variances were also fixed to zero at the group level. We tested these two sets of constraints in all our models and the fit did not worsen with these constraints.

Multi-level CFA allows us to assess the extent to which the group influences the two dimensions of in-group identification, within each study. Within Multi-level CFA, group influence is shown in the intra-class correlation (ICC) -- the proportion of the total variance in individuals' responses attributable to their group membership. The ICC ranges from 0 to 1. Thus, a higher ICC for self-definition (or self-investment) shows that individuals within a group are more similar in their degree of self-definition (or self-investment) than individuals in general (Bliese, 2000; Kenny & LaVoie, 1984). If the ICC were 0, individuals within the same group would be no more similar in their self-definition (or self-investment) than individuals in general regardless of group membership. If the ICC were 1, individuals in the same group would be complete replicates of one another in their degree of self-definition (or self-investment). Group influence on self-definition and self-investment can be examined more precisely with the two statistics used to calculate the ICC $\left(\frac{\tau_{00}}{\tau_{00}+\sigma^2}\right)$: individual-level variance (σ^2) and group-level variance (τ_{00}) (see Bliese, 2000).

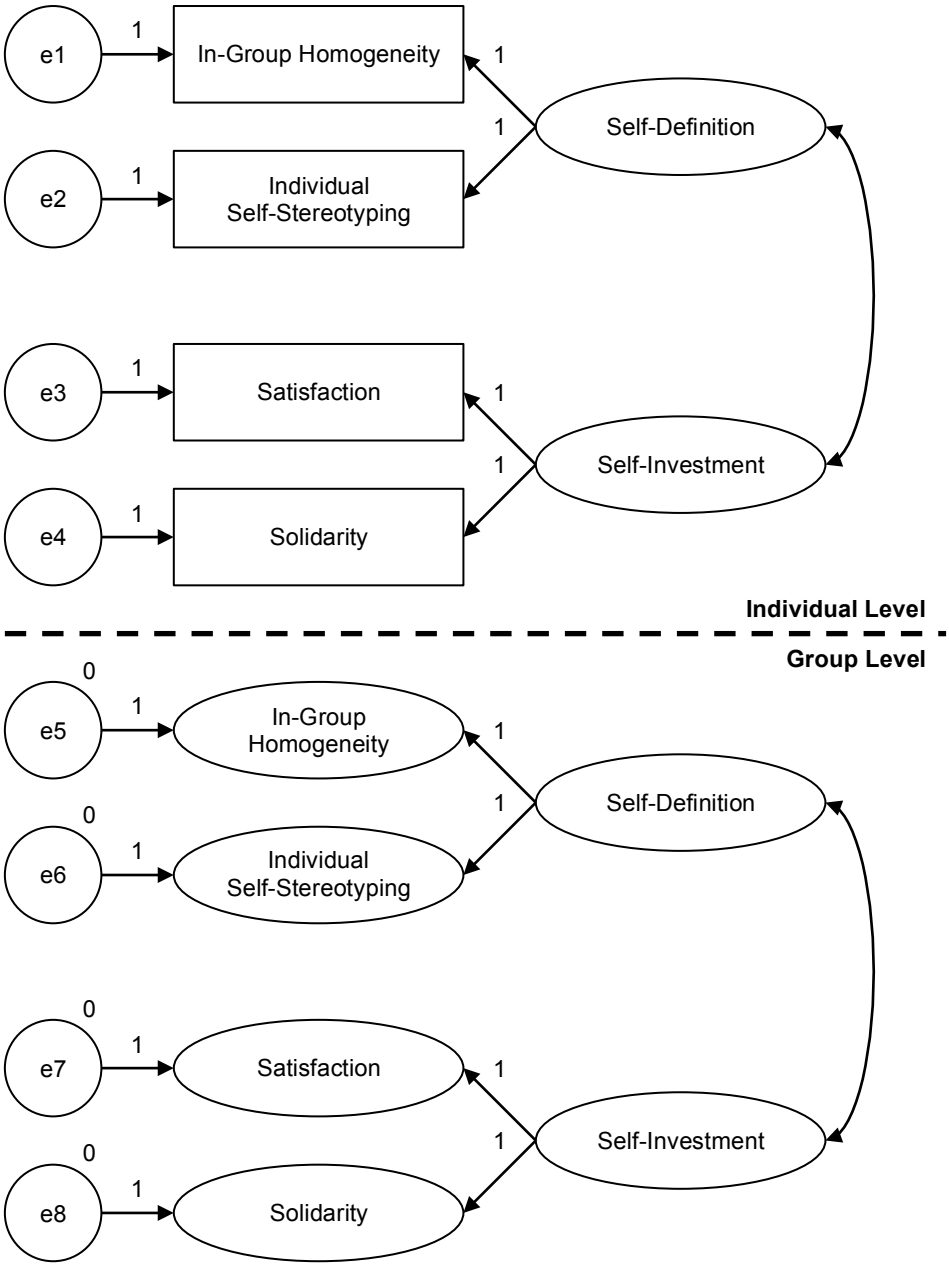

Figure 5.2a. Hypothesized two-dimensional measurement model of in-group identification.

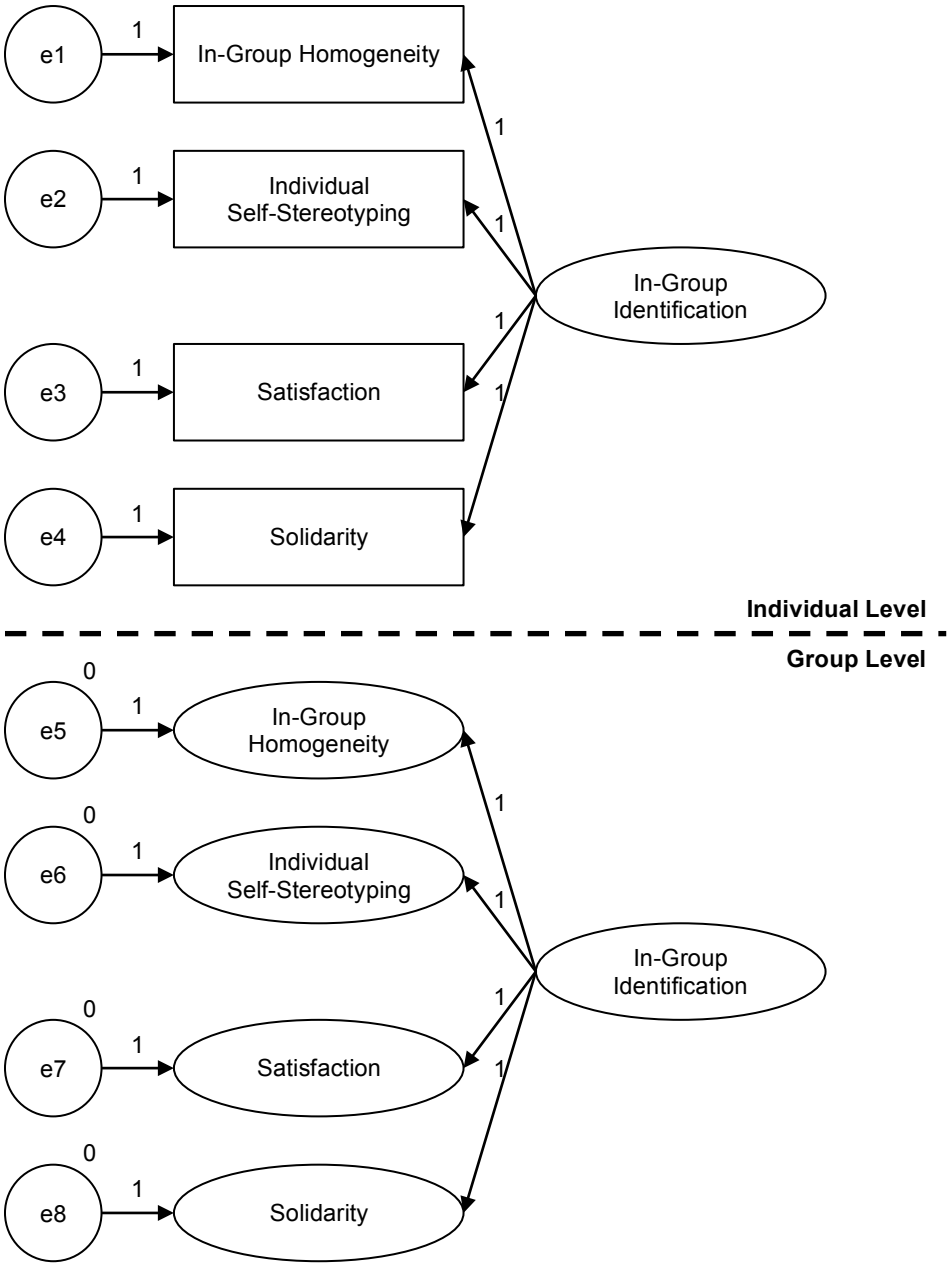

Figure 5.2b. Alternative two-dimensional measurement model of in-group identification.

We conducted our analyses in two steps. As a baseline, Step 1 estimated a model that did not constrain individual- and group-level variances of self-definition and self-investment to be equal across the three studies. This model provides the same results as when we would have run the specified model in each study separately. In Step 2, we provide a formal test of the hypothesized differences across studies. We statistically assess whether individual-level variance of self-investment decreased, and group-level variance of self-investment increased over studies (with increased interaction), while individual- and group-level variances of self-definition remained unchanged across studies. If a factor variance can be constrained to be equal across the three studies with no significant decrease in model fit, it shows that this constrained model is superior to the baseline model. As a model that constrains a factor variance to be equal across the three studies is more parsimonious, it should be preferred to the less parsimonious baseline model. In other words, an equally good fitting constrained model indicates that there is little difference in the factor variance across the three studies.

Results

The base line model specified the two-dimensions of in-group identification at both the individual and the group level, in all three studies. This base-line model fitted the data well, $\chi^2(30) = 46.673$, $p = .027$, CFI = .982, RMSEA = .060 (Hu & Bentler, 1999). Importantly, this model fitted the data better than a comparable model that specified only a single factor of general identification (see Figure 5.2b), factor, $\Delta\chi^2(12) = 267.339$, $p <$

.001. Results are displayed in Table 5.1. Below we discuss the results of each study.

Table 5.1. Grand means, and group influence statistics for in-group identification in Studies 1-3.

Dimensions	Study	*M*	*SD*	*ICC*	Individual-level Variance	Group-level Variance
Self-definition	5.1	4.75[a]	1.02	.182*	.726 (.123)***	.162 (.096)*
	5.2	3.82[b]	0.97	.134[†]	.716 (.115)***	.111 (.084)[†]
	5.3	4.18[b]	1.16	.172*	.954 (.151)***	.198 (.115)*
Self-investment	5.1	4.43[a]	1.02	.023	.895 (.141)***	.021 (.068)
	5.2	4.38[a]	0.88	.269**	.490 (.082)***	.177 (.076)**
	5.3	4.93[b]	1.02	.404***	.552 (.087)***	.374 (.124)***

Note: Responses were given on a 1 (*totally disagree*) to 7 (*totally agree*) scale. The original 6-point scale used in Study 5.1 was transformed to be comparable to Studies 5.2 and 5.3. Means with different superscripts for each dimension are significantly different, p(2-sided) < .05. The standard errors for the variances are reported between brackets. A z-test was used to test whether variances were significantly higher than 0 (1-sided, as suggested by Snijders & Bosker, 1999, p. 90).
[†]p < .100. *p < .050. **p < .010. ***p < .001.

Study 5.1

In Study 5.1 there was only minimal interaction. The ICCs in Table 5.1 show that in this study, already 18% of the total variance in individuals' self-definition was explained by their group membership, while only 2% of the variance in self-investment was explained by individuals' group membership. Examination of the variances of each dimension of in-group identification, at each level, offers a more fine-grained analysis than the ICC of how much individuals and groups differ from each other (see Table 5.1).

At the individual level, both self-definition and self-investment had statistically significant variances. Thus, individuals differed a good deal from each other in their degree of self-definition and self-investment. At the group level, there was only significant variance between groups in self-definition, which indicates that groups differed in the extent to which group

members defined themselves in group terms. But, as expected, with only minimal interaction within the groups, groups do not significantly differ from each other in their degree of self-investment. Thus, simply by being a group, the group influenced the degree to which its members defined themselves in terms of the group. However, as expected, with the limited interaction in Study 5.1, self-investment was almost exclusively an individual-level phenomenon.

Study 5.2

Study 5.2 built on Study 5.1 by increasing the degree of interaction. In Study 5.2, the percentage of variance explained by the group was quite similar to Study 5.1 for self-definition, 13%. However, the ICC for the self-investment factor was much greater than that for Study 5.1 as 18% of the variance in self-investment could be explained by group membership. Thus, with increased group interaction, the group influenced members' self-investment.

As indicated by the significant individual-level variance of the two dimensions, individual differences in self-definition and self-investment remained. But as expected, the individual-level variance of self-investment was smaller than in Study 5.1. Despite a decent ICC and a relatively large number of groups, the group-level variance of the self-definition factor was only marginally significant in Study 5.2. Given that the variance here is very similar to that in Study 5.1, it seems likely that the small size of the three-person groups in this study hampered statistical power at the group level (see Kenny et al., 1998). As a result, it is all the more impressive that the group-level variance of self-investment was statistically significant. Thus, groups differed from each other in their degree of self-investment in the group. In comparison to Study 5.1, the ten-minute, face-to-face, interaction

in Study 5.2 appeared to be enough to enable the group to influence individuals' degree of self-investment in their group.

Study 5.3

Study 5.3 allowed for twice as much interaction as Study 5.2. As expected, the ICC for self-definition was quite similar to that of Study 5.1 and 5.2. Nineteen percent of the variance in individuals' self-definition was explained by their group membership. However, with increased interaction, group influence on group-members' self-investment was larger than in Study 5.1 and 5.2. The group individuals belonged to explained a notable 40% of the variance in self-investment. This is quite high for groups of such small size (Bliese, 2000). Examination of the variance at each level shows that although individuals still differed in the extent of self-definition and self-investment, groups also differed in the extent of self-definition and self-investment. With twice the interaction of Study 5.2 in Study 5.3, group differences in self-investment were larger in Study 5.3 than in Study 5.2.

Thus, results indicate that across the three studies, members' self-investment in their in-group increasingly became a group-level phenomenon. As the amount of group interaction increased, the group individuals belonged to explained a greater proportion of the total variance in self-investment. More precisely, with greater interaction the group-level variance of self-investment increased and the individual-level variance decreased. However, we have not yet offered a formal test of these hypothesized differences across studies.

The Effect of Increased Interaction Across Studies

In a second statistical step, we formally assessed whether individual- and group-level variance in self-definition remained unchanged across studies (Figure 5.1a), while for self-investment individual-level variance decreased and group-level variance increased with greater interaction from Study 5.1 to Study 5.3 (Figure 5.1d).

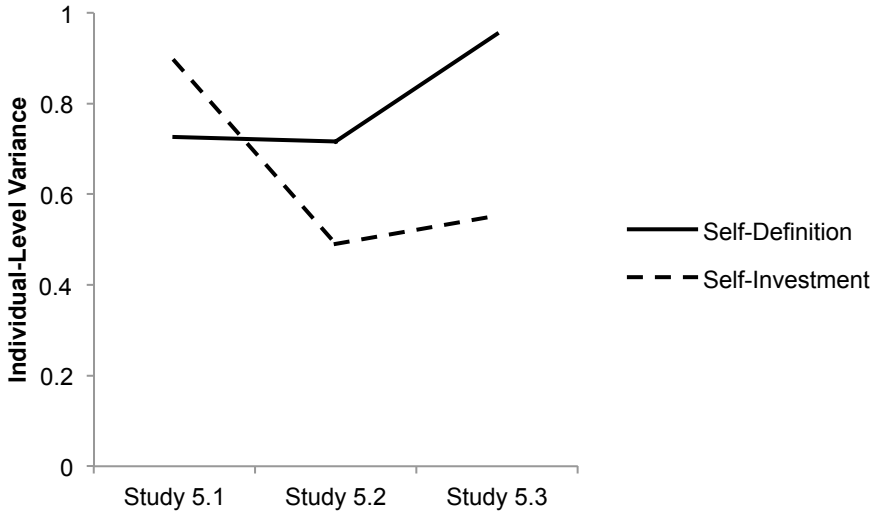

Figure 5.3a. Individual-level variance of self-definition and self-investment dimensions of in-group identification across studies.

Constraining the individual-level variance of self-definition across the three studies did not significantly reduce model fit, $\Delta\chi^2$ (2) = 2.045, p = .360. Thus, as expected, group members' self-definition did not change with increased group interaction over studies (see Figure 5.3a). However, constraining the individual-level variance of self-investment across studies significantly reduced model fit, $\Delta\chi^2$ (2) = 8.071, p = .018. Thus, group members' self-investment became more similar with greater group interaction. More specifically, it seems that group members had more

similar degrees of self-investment in the two studies with face-to-face interaction than in the study with minimal interaction on-line (see Figure 5.3a).

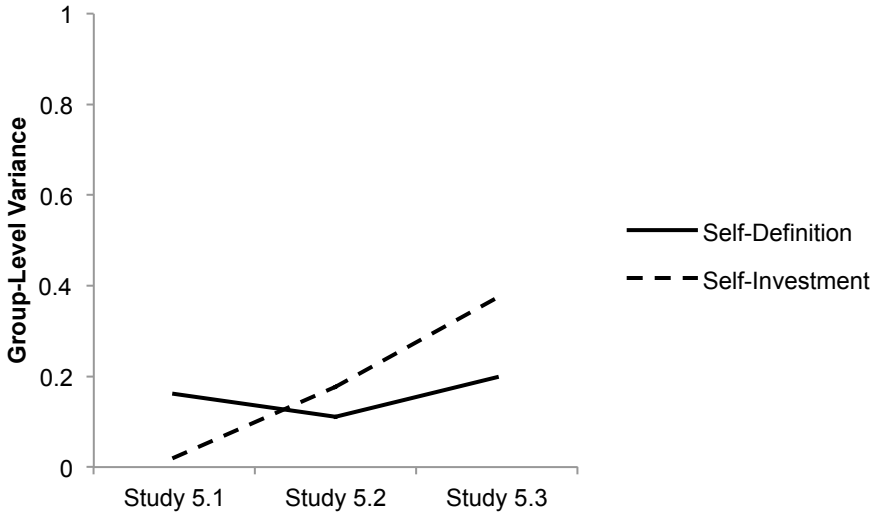

Figure 5.3b. Group-level variance of self-definition and self-investment dimensions of in-group identification across studies.

As hypothesized, constraining the variance of self-definition to be equal at the group level across all three studies did not worsen model fit, $\Delta\chi^2$ (2) = 0.402, p = .818. In other words, groups did not differ more from each other in their degree of self-definition with greater interaction (see Figure 5.3b). However, there was a significant decline in fit when constraining the group-level variance of self-investment to be equal across studies, $\Delta\chi^2$ (2) = 6.700, p = .035. As shown in Figure 5.3b, the group-level variance of self-investment increased from .021 in Study 5.1 to .177 in Study 5.2, to .374 in Study 5.3. As hypothesized, with greater group interaction, groups came to differ more from each other in their degree of self-investment. Thus, the increased interaction across the three studies

increased the group's influence on the self-investment dimension of in-group identification. In contrast, increased interaction did not increase the group's influence on the self-investment dimension.

General Discussion

We aimed to demonstrate the value of a multi-level approach to in-group identification by examining how group influences on in-group identification emerge in newly formed groups. We used the conceptual distinction between the self-definition and self-investment dimensions of in-group identification to hypothesize that merely *being* a group would influence members' self-definition, while group influence on self-investment would emerge out of interaction (or *group-doing*). Comparisons between data collected in three small-group studies, ranging in the amount of group interaction, supported our predictions. Specifically, the results showed that there was a consistent group influence on self-definition in all three studies, irrespective of the amount of interaction within each study. In contrast, group influence on self-investment increased (as predicted) with interaction increasing from very little (in Study 5.1) to quite extensive (in Study 5.3).

We reasoned that from the moment a group is formed, the existence of the group as a collective entity provides a common reference point for members' self-definition. Thus, no actual interaction within a group is necessary for the in-group to influence individuals' perceived similarity to other members (individual self-stereotyping) and perceived homogeneity of the group as a whole (i.e., in-group homogeneity). In fact, the group affected members' self-definition even when members did not see each other face-to-face. In Study 5.1, simply exchanging a few electronic

messages with one's fellow group members was enough for member's self-definition to be affected by their group membership. This is consistent with the Social Identity model of Deindividuation (e.g., Lea & Spears, 1991, Reicher, Spears, & Postmes, 1995; Postmes et al., 1998), which argues that the in-group has a strong influence on how members define themselves in online settings.

We reasoned that self-investment in the group is qualitatively different from self-definition by the group. For the group to influence solidarity and satisfaction with the group, members must have some shared experience of what it is like in the group. This is why we believe the group explained no variance in self-investment in Study 5.1, which had only minimal, on-line interaction. Through group interaction shared experiences emerge that should provide a common basis for group members' self-investment. Indeed in Study 5.2, after 10 minutes of face-to-face interaction, the group explained a moderate amount of variance. This was doubled in Study 5.3, in which there was twice as much interaction as in Study 5.2. Thus, self-investment became increasingly a group-level phenomenon as interaction in the group increased. Our results suggest that this occurs in two ways. As each group develops its own shared experiences through interaction (1) groups increasingly differ in the extent to which they invite members to self-invest in the group, and (2) within a group individuals' self-investment become increasingly similar. For example, some cities provide much more opportunity for interaction between individuals than other cities, perhaps because they offer good public transport. In cities with greater interaction, the quality of those interactions should be a bigger group-level influence on residents' level of self-investment in the city. In cities with much less interaction between individuals, there should be much less of a city-level influence on resident's self-investment in the city. Indeed,

self-investment should be more of an individual-level phenomenon in cities with little group interaction.

The results corroborate and extend the two-dimensional model of in-group identification by Leach et al. (2008) by showing that the two-dimensional model is also applicable to newly formed small groups, at both the individual and the group level of analysis. Thus, at the individual level, identification with small groups seems to be two-dimensional, like identification with large social categories such as sex, ethnicity, nationality, or university. This suggests that the psychological side of groups may be similar despite notable differences in size and other features (see Jans, Postmes, & Van der Zee, 2011; Postmes, Baray, Haslam, Morton, & Swaab, 2006; Turner et al., 1987). Moreover, the differential influence of the group on individuals' self-definition and self-investment provides novel evidence of the validity of the distinction between these two dimensions of identification.

Implications

Categorical vs. Dynamic Groups. The distinction between self-definition and self-investment echoes the distinction between groups as categories (defined on the basis of similarity or common identity), and groups as dynamic (defined on the basis of interaction or common bonds (Deaux & Martin, 2003, Prentice et al., 1994; Wilder & Simon, 1998). However, group identification does not seem to be *either* categorical or dynamic in nature: individuals can identify with groups through self-definition and self-investment, simultaneously. In fact, in many groups both categorical and dynamic processes play a role (Postmes et al., 2005a; Postmes, Spears, Lee, & Novak, 2005b). This more flexible view of the categorical and dynamic properties of groups is consistent with our finding

that the more categorical property of self-definition is present at the group-level from the moment a group is formed, while the more dynamic group-level property of self-investment depends on actual group interaction.

The Importance of Multi-level Approaches. Individuals' in-group identification seems to be influenced by the particular group as well as by the particular individual. Inattention to group-level effects is likely to lead to an overestimation of individual-level effects (for discussions, see Bliese, 2000; Kenny et al., 1998). This may inadvertently reinforce the view that in-group identification is solely an individual difference characteristic. On the other hand, focusing only on measurement at the group level ignores the potentially important variance across individuals that may explain their experience and behaviour. Thus, whenever social psychological phenomena may operate at multiple levels of analysis it is important to examine these phenomena with a multi-level approach.

In addition, when in-group identification is considered as a predictor of group- and individual-level outcomes, identification at the group level should be examined. For instance, the question of which groups are most likely to engage in collective action is one that may be best answered with attention to between-group differences in in-group identification. Although strong in-group identification at the individual level increases individual's willingness for collective action (for a review, see Van Zomeren, Postmes, & Spears, 2008), strong in-group identification at the group level might help to turn this willingness into specific action. Being in a group that is highly identified may provide the sort of social support required of complicated or dangerous collective action. Distinguishing individual-level variance from group-level variance as we have done here allows for a more precise examination of the group-level processes at work.

Limitations and Future Directions

Multi-level analyses of individuals in groups are difficult for a number of practical reasons (e.g. finding enough participants). In addition, for a number of statistical reasons, it is difficult to find a multiple factor structure at the group level and to observe group-level properties in groups of three to five members (see Kenny et al., 1998). In general, multi-level analyses of the sort we performed here tend to be low in statistical power (Kenny et al., 1998). It seems important to also explore the group-level properties of in-group identification with a large number of large-scale groups typically examined in social psychological studies of in-group identification (e.g., ethnicity, nationality, university). For example, this may help us examine whether previous found effects of group status on identification, are also reflected in equivalent degrees of identification with a wide variety of groups with similar status.

It may be important to note that our examination of experimentally created groups may not parallel exactly the emergence of group-level properties of identification with pre-existing social categories, such as nationality. In these large groups, it is impossible to interact directly with all members of the group. Thus, direct interaction cannot be the only means through which members achieve shared group experiences. It is likely that modes of indirect or symbolic interaction have a stronger influence on the emergence of group-level self-investment in large social categories. For example, entrepreneurs of identity, the media, history, and inter-group events (such as important sport matches or war) can provide a shared experience for group members of what the group is like (see also Postmes et al., 2006). Furthermore, since larger groups can often be subdivided into smaller subgroups, interaction within these subgroups might be high, while interaction between subgroups is low. Therefore, it might well be that levels

of self-investment are similar within subgroups, but differ between subgroups.

Although group identification is often treated as a characteristic that varies across individuals, this does not mean that it is a strictly individual-level phenomenon. Groups can influence members' degree of self-definition by the group and self-investment in the group. Where in-group identification is investigated as having both individual- and group-level properties, differences between groups and similarities within groups can both be examined simultaneously. Both of these group-level effects have seldom been studied by social psychologists. However, a multi-level approach enables better examination of the uniquely social psychological interplay of the individual and the group as distinct and yet inter-linked phenomena.

Chapter 6

GENERAL DISCUSSION

In this dissertation we asked the question whether individuality and social solidarity can be reconciled. Lay theorists and social scientists alike assume that the two are somehow opposites of each other (e.g., Putnam, 2000). Increasing individualisation is assumed to obstruct social solidarity, diversity in groups is assumed to hamper group unity and cohesion, and feeling different from others is assumed to imply feeling excluded. However, we argued and showed that such reconciliation is possible and that individuality and solidarity can be mutually reinforcing.

In answering our overarching question, we took the interactive model of identity formation (IMIF, Postmes, Haslam, & Swaab, 2005a) as our point of departure. This model suggests that who "we" are might not only be determined by what makes "us" different from "them" (deductive processes of social identity formation) but also by the contributions of distinctive individuals within the group (inductive processes of social identity formation). These inductive processes through which individuals can contribute to a social identity could hypothetically bring individuality and group membership together.

In order to examine this idea, we focused on several areas where deductive and inductive processes were hypothesized to have distinct effects. First, whereas deductive processes suggest that perceiving oneself as similar to other group members can be an underlying mechanism for social identity formation, inductive processes suggest that perceiving oneself as individually distinct might be an underlying mechanism for social identity

formation (Chapter 2). Second, whereas heterogeneity of group members should hamper the formation of a shared identity when deductive processes are at work, perceived heterogeneity should enrich the formation of a shared identity when inductive processes are at work (Chapter 3). Third, whereas deductive processes of social identity formation suggest that once social identity is formed, group members will "depersonalize" in terms of shared group characteristics and behave in line with group norms, social identities that are inductively formed might leave more room for expressing individuality in ways that could be considered "deviant" to group norms (Chapter 4). Finally, whereas deductive processes of social identity formation suggest that intragroup dynamics are unnecessary for shared social identity formation to take place, inductive processes suggest a more important role for intragroup dynamics in the formation of shared social identity (Chapter 5).

What Did We Find?

Before discussing the theoretical and practical implications of this dissertation, we will first give a summary of the main findings of our research.

Chapter 2

In Chapter 2, we showed that inductive processes of social identity can be observed in small interactive groups and large social categories alike, and that perceived individual distinctiveness is an underlying mechanism for inductive processes resulting in social identity. In particular, we tested the model that to the extent a group is perceived as inductively formed, individuals will perceive themselves as more distinctive, which will foster

perceived groupiness, and in turn will enhance identification. Three survey studies consistently supported the validity of our model over other theoretical models in various group contexts.

In Study 2.1, we asked participants to think of small self-relevant groups (ranging from 4 to 15 members) they were a member of, such as their group of friends or their work group. We asked them to answer questions concerning perceived inductive social identity formation, individual distinctiveness, entitativity and identification. Study 2.2 tested the same model for a much broader set of groups. This time, we asked participants to think about specific "types" of groups from Lickel's (e.g. Lickel et al., 2000) group taxonomy (i.e. intimacy groups, task groups, social categories, and loose associations) when answering the questions. Finally, in Study 2.3 we tested causality by using group size as an extraneous indicator of inductive social identity formation, as it should be easier to make an individual contribution to the group's identity, the smaller the group is. As in Study 2.1, we asked participants to think of groups they were a member of but this time the group they had to think about was either of small (4-15 members), medium (30-50 members) or large (over 200 members) size.

Together the results of the three studies in Chapter 2 consistently supported our theoretical model. The perception that individual members could influence the group's identity was related to individuals' feeling more distinctive within the group. Moreover, this perceived individual distinctiveness was associated with greater entitativity of the group, which in turn was highly related to identification with the group. Furthermore, even though perceptions of inductive processes of social identity formation were weaker as group size increased (Study 2.3), to the extent that inductive processes *were* perceived to play a role, perceived individual distinctiveness was still associated with indicators of social identity formation (entitativity

and identification) in the predicted way. This suggests that, in contrast to what can be expected from deductive processes of social identity formation, individuality and group membership do not need to be antagonistic.

Thus Chapter 2 provided first empirical support for the possibility that inductive processes of social identity formation can reconcile individuality with group solidarity. However, this survey research still focused on individual perceptions of the relation between individual distinctiveness and group membership and did not test whether individuality and group solidarity can be reconciled in interaction with other group members. In other words, the fact that perceptions of individuality and group unity might co-exist at the level of perceptions does not allow for any conclusions about the possibility for a set of distinctive individuals to form a group with a strong sense of unity and a *shared* social identity.

Chapter 3

In Chapter 3, we showed that small lab-created groups can form a shared social identity through inductive processes, and that groups perceived to be heterogeneous can form a stronger shared identity through inductive processes, than through deductive processes.

In Study 3.1, we manipulated the process of social identity formation (deductive vs. inductive) by varying the manner in which group members were asked to create team shirts. After that, we measured group members' identification and perceived entitativity as indicators of social identity. This study provided support for the possibility of groups forming a shared social identity inductively. Inductive processes resulted in a stronger sense of social identity than deductive processes did. Although this study showed that shared identities can be formed out of distinct contributions by group members, it did not directly test the prediction that inductive

processes of social identity formation would be a good method to unite groups that are heterogeneous.

Study 3.2 therefore tested the prediction that outcomes of perceived group diversity might depend on the process of social identity formation. To this end, in addition to manipulating the process of social identity formation, we manipulated perceived group diversity (homogenous vs. heterogeneous) by providing bogus feedback about the differences in personality within the group. Furthermore, we measured group cooperation as an additional indicator of shared identity. As expected, groups that were perceived to be homogeneous formed a stronger shared identity deductively than inductively. However, in line with predictions derived from the IMIF, groups that were heterogeneous were shown able to form a stronger social identity inductively than deductively, as evidenced by higher identification and more group cooperation. This suggests that individual differences can be combined with a high degree of in-group solidarity, when social identity is inductively formed. Chapter 3 thus demonstrated the possibility of forming social identities from the bottom-up, and the positive consequences this can have in groups perceived to be heterogeneous. Individuality and group membership can be reconciled by inductively forming a shared social identity that did not exist before. However, these studies did not explore the extent to which individuality might also be an outcome of inductive social identity formation, or in other words, the extent to which individuality and social identity might become mutually reinforcing.

Chapter 4

In Chapter 4, we showed that within groups perceived to be heterogeneous, inductive social identity formation can foster the expression of idiosyncratic arguments that are inconsistent with group norms. In two studies with bogus groups, social identity formation and diversity were manipulated in a similar vein as in Study 3.2. However, rather than actually being in a "real" group, participants were made to believe they were interacting in a real group with real group members. After manipulating social identity formation and diversity, we established a clear group norm regarding a particular attitude topic. Then, participants were asked to generate arguments, which could either be consistent or inconsistent with the pre-established group norm. The two studies differed in the attitude topic that participants generated arguments about.

In Study 4.1, German participants were asked to generate pro- and contra-arguments toward a university proposal for mandatory Dutch courses for all foreign students. Before argument generation participants were made to believe that German students in general and their experimental group in particular, held a clear norm that this proposal was a good idea. In Study 4.2, Dutch participants were asked to generate pro- and contra-arguments toward a new governmental law stating that students who did not finish their university study within 6 years would be fined, irrespective of personal circumstances. Before argument generation participants were made to believe that Dutch students in general and their experimental group in particular, held a clear norm that this law was bad.

Results of the two studies together showed that participants within groups perceived to be heterogeneous formed on average a stronger social identity inductively, than deductively. Furthermore, they also generated more idiosyncratic arguments when social identity was formed inductively,

rather than deductively. Individuality and social identity thus became mutually reinforcing. Interestingly, we found an opposite effect over studies within groups perceived to be homogeneous: Participants on average expressed more norm-inconsistent arguments when social identity was deductively formed than when social identity was inductively formed. It thus seems that within Chapter 4, group members were expressing more norm-inconsistent arguments in those instances in which social identity was strongest.

Together, Chapters 2 to 4 were all consistent with the idea that inductive processes can lead to social identity formation. But although the measures and manipulations of induction used were all geared towards the idea that the process of induction relies on social interactions within the group, they do not yet provide insight in the extent to which individual group members' involvement in the dynamics of intragroup interaction is also *necessary* for shared psychological group formation, nor does it differentiate among different aspects of social identity.

Chapter 5

In Chapter 5, we took another approach to studying social identity formation, by exploring the extent to which intragroup interaction (group-doing) is necessary for the emergence of shared social identity. In this research, we distinguished between a self-definition dimension of identification that refers to the extent to which individuals perceive themselves and other in-group members as a category, and a self-investment dimension of identification that refers to individuals' psychological investment in and solidarity with the in-group (see Leach et al., 2008). We compared three studies of zero-history small groups with varying extents of intragroup interaction. In a Multi-level Confirmatory

Factor Analysis, we could examine the extent to which shared identification emerged on these two dimensions. Due to the multi-level approach, we could differentiate between identification effects at the individual level and at the group level.

As expected, mere categorization as a group was enough for the group to influence members' self-definition. In contrast, intragroup interaction was necessary for the development of group-level self-investment. This suggests that although intragroup interaction might not be necessary for shared perceptions of categorizations, it seems key for the emergence of shared solidarity with the group.

What Have We Learned?

In the introduction, we indicated some key issues and questions in the IMIF that we aimed to resolve in this dissertation. First, we tested whether inductive processes of social identity formation can reconcile individuality with social identity. Second, we improved the manipulation of social identity formation. Third, we explored whether inductive processes of social identity formation can be generalizable to a variety of groups. Last, we examined whether inductive social identity formation can have different consequences than deductive social identity formation.

In the remainder of this discussion, we will consider how our research speaks to these issues, and what the implications of our research are for the IMIF and other theoretical approaches. Furthermore, we will raise new questions that can serve as input for future research, and we will conclude on the more practical and societal implications of our research.

Can Inductive Social Identity Formation Reconcile Individuality and Social Identity?

As mentioned above, the results of Chapter 2 and 3 (and 4) supported the idea that inductive social identity formation can reconcile individuality and social identity. While the individuality and group membership are assumed to be opposites when social identity is deductively formed, we showed that they can come into agreement through inductive social identity formation.

Elaboration on the traditional social identity perspective. The traditional social identity perspective (Tajfel & Turner, 1979; Turner, 1985) does not seem to provide a full explanation of the relation between the individual and the group. The individual and the group are not necessarily antagonistic but can also be salient at the same time. Through inductive social identity formation, a (shared) social identity can be formed despite within-group differences (Chapter 3 and 4) and despite individual distinctiveness (Chapter 2). This suggests that there is more to social identity formation than outlined in self-categorization theory by the principle of meta-contrast (Turner, 1985; Turner & Oakes, 1986). Social identity formation is not necessarily fostered to the extent that the within-group differences are smaller than the between-group differences: When social identity is formed through inductive processes, within-group differences do not obstruct, and sometimes even foster, social identity formation. Our findings also contradict optimal distinctiveness theory's assumption (Brewer, 1991) that the need for distinctiveness and the need for belongingness are always in conflict. Given that individual distinctiveness and group membership go together through inductive social

identity formation, individuals should be able to *maximally* satisfy both needs at the same time.

Reconciling diversity in organizations. The finding that within-group differences can be reconciled through inductive social identity formation may provide opportunities for reconciling diversity within organizations and organizational teams. Within organizational psychology, problems of diversity have predominantly been explained from a social categorization perspective; within diverse organizations clear ingroup-outgroup distinctions may arise (such as black women vs. white men) which hamper the solidarity with the team or organization as a whole (Williams & O'Reilly, 1998). Translated to the IMIF, it thus seems that problems of diversity have been explained reasoning from deductive social identity formation. In line with this perspective, organizational psychologists seem to have predominantly focused on top-down solutions for overcoming problems of diversity. That is, it has been argued that organizations can manage diversity by incorporating a particular diversity perspective, ranging from eliminating or ignoring diversity to valuing diversity (Van der Zee & Otten, 2013). However, in contrast to these top-down (deductive) solutions, our research suggests that problems of diversity might also be overcome through inductive social identity formation. Rather than the organizational management superimposing a norm that diversity needs to be valued (e.g. Homan, Van Knippenberg, Van Kleef, & De Dreu, 2007; Luijters, Van der Zee, & Otten, 2008), through inductive social identity formation, individuals may create a shared identity that is organic and open to diversity (cf. Haslam, Eggins, & Reynolds, 2003). This bottom-up solution to problems of diversity might even provide a better solution than the top-down endorsement of diversity. That is, inductive social identity formation

does not value a particular difference over other differences (such as the case in affirmative action procedures for minorities) but allows for individuals to contribute the distinctiveness that they themselves consider important. Future research could begin to explore whether these inductive solutions to overcoming diversity have advantages over top-down solutions.

In addition to overcoming the problems of diversity, inductive processes of social identity formation may allow groups to grasp the benefits of diversity. Heterogeneous groups have the potential to outperform homogenous groups (i.e. in creativity, innovation, and decision making) as they may possess a broader range of task-relevant knowledge, skills, abilities, opinions and perspectives (Williams & O'Reilly, 1998). However, whether heterogonous groups fulfil this potential depends on the extent to which group members elaborate on their differences (Van Knippenberg, De Dreu, & Homan, 2004). In other words, group members need to share their unique knowledge and perspectives within the group, and integrate them into a group product (Van Knippenberg, & Van Ginkel, 2010). As inductive social identity formation allows group members to create a shared identity without sacrificing their diversity, it may create possibilities for heterogeneous groups to benefit from their diversity and become more creative (see also consequences of inductive social identity formation).

Boundaries to reconciliation. Although our research shows that perceived differences between individuals do not need to obstruct the formation of shared social identity, there might be boundary conditions to the differences that inductive social identity formation can reconcile. We believe that inductive processes might not result in a shared identity when differences between individuals are so fundamental that individuals are

unwilling to take joint action or interact (cf. Chapter 5). Individuals from groups that are in intractable conflict, such as Israelis and Palestinians, might for this reason be unable to form a shared identity through inductive processes. In addition, we expect that inductive processes might not result in shared identity if the topic of interaction concerns a fundamental difference between group members. For example, pro-abortion and anti-abortion supporters might be quite able to inductively form a shared identity around an environmental issue, but not around an abortion issue. Future research could begin to explore these boundary conditions to inductive social identity formation as a method for reconciling groups.

What is Inductive Social Identity Formation and How Does It Work?

A second aim of this dissertation was to better operationalize inductive social identity formation in order to learn more about its characteristics. We operationalized the *process* of inductive social identity formation quite carefully so that it could more clearly be separated from other related theoretical constructs. In the introduction we criticized previously used manipulations of inductive social identity formation because they did not really capture the *process* of induction. Rather they highlighted "common bonds" (Postmes, Spears, Lee, & Novak, 2005b; Swaab, Postmes, & Spears, 2008), making it hard to disentangle inductive social identity formation from relational identity salience. Or they highlighted a focus on individuality or a focus on within-group diversity (Brooke, Postmes, Jetten, & Dyson, 2009), making it hard to disentangle it from manipulations of perceived individuality or perceived diversity within the group.

The manipulations of induction in Chapter 3 and 4 addressed these issues by manipulating the extent to which group members could make an individual contribution to the representation of the group as a whole, without referring to interpersonal relations. These manipulations fitted better with the operationalization of inductive social identity formation as an active process through which individual group members contribute to the formation of a shared social identity (relying not just on their own pre-existing ideas of the group but also on the input they and other group members have in the process). We showed that these manipulations allowed for an integration of individual differences in a group, without focusing on interpersonal relations.

Difference between induction and relational identity salience. In comparison to previously used manipulations of inductive social identity formation, our manipulations manipulated more than just relational identity salience (cognitively defining the self in terms of the interpersonal relations with others; Brewer & Gardner, 1996). We took into account that inductive social identity formation requires input from others: group members need to do things together (what we call group-doing in Chapter 5). Furthermore, we highlighted that inductively formed social identity concerns the individual's relation to the group as a whole (social identity), and not the individual's relation to close others (relational identity). This was also reflected in our manipulations having an effect on our indicators of shared social identity formation (i.e. group identification, entitativity and cooperation). Still, theoretically it may be possible that inductive processes stimulate the emergence of relational identity in addition to social identity as

they may make the relations between individuals salient as well (although this would be very unlikely according to Brewer & Chen, 2007[25]).

Difference between induction and group self-verification. Furthermore, we argued and showed that inductive social identity formation is different from self-verification (Swann, 1983, 1996), a construct that has been linked to identity theory (see Stets & Burke, 2000). According to self-verification theorists (Swann, 1983, 1996; see also Mead 1934), people actively strive to ensure that their experiences in groups confirm their self-views. Self-verification by the group has been shown to be related to group identification (e.g., Swann, Milton, & Polzer, 2000) and has been proposed to help groups find value in diversity (Swann, Polzer, Seyle, & Ko, 2004). Although self-verification may have similar consequences to inductive social identity formation, the process of inductive social identity formation is theoretically distinct from self-verification. Self-verification is something that groups do for individuals, and which in turn may result in increased identification with that group. In contrast, inductive social identity formation concerns the influence and contribution of individuals to the group. The results of our pilot study in Chapter 2 supported the distinctiveness of inductive social identity formation from self-verification. However, it could be that self-verification is a consequence of inductive social identity formation, as individuation fosters self-verification (Swann, Kwann, Polzer, & Milton, 2003).

[25] Brewer and Chen (2007) argue "… that relational and group collectivism may be more incompatible overall than are aspects of individualism with aspects of either form of collectivism…, connectedness to others based on strong interpersonal ties and networks may inherently conflict with a depersonalized representation of social groups and associated values" (p. 142).

Inductive social identity formation, thus, concerns the process through which individual group members actively contribute to the formation of a shared social identity, and is different from relational identity salience and self-verification. The next aim we had for this dissertation was to explore whether inductive processes can be observed beyond small interactive groups.

How Generalizable are Inductive Processes of Social Identity Formation?

Originally the IMIF was proposed as a model for small interactive groups. However, we suggested that to the extent that the model could apply to all sorts of groups (ranging from small dynamic groups to large social categories), inductive processes might create opportunities for reconciling today's increasing individualization with social solidarity.

Chapter 2 provided support for the applicability of inductive processes of social identity formation beyond the groups that have hitherto been considered. Results confirmed that inductive processes of social identity formation were perceived to be operating across the board in intimacy groups, task groups, social categories, and loose associations. This suggests that the IMIF might be useful for understanding the relationship between individuality and group membership in *all* groups.

Having said this, we should also acknowledge that our research showed that inductive processes of social identity formation are perceived to be weaker the larger the group is. It seems that in these larger social categories, individuals' interactions influence the group's identity more indirectly, by influencing their subgroup's identity, which in turn influences the overarching identity. This stepwise process in which individuals first influence their subgroup identity, and then the overarching identity has

been described by the ASPIRe model as the path to creating more organic organizational identities (Haslam et al., 2003; Peters, Haslam, Ryan, & Fonseca, 2013). Thus, although not always directly, it might be inductive processes through which even the shared identity of large pre-existing social categories can be changed.

Categorical and dynamic groups. Our research suggests that social identity formation in all sorts of groups might best be understood by considering both categorical and dynamic processes (see also Postmes, Baray, Haslam, Morton, & Swaab, 2006). We found that small groups can form a shared social identity through a deductive process (Chapter 3 & 4; see also Postmes et al., 2005a/b). This finding goes against the suggestion that categorical (or deductive) processes described within the traditional social identity approach are less applicable to small interactive groups (cf. Prentice, Miller, & Lightdale, 1994). Furthermore, we found that inductive social identity formation can also play a role in large social categories (Chapter 2). This finding goes against the suggestion that the dynamics between individuals are irrelevant or unnecessary for understanding processes in large social categories or minimal groups (Turner, 1982, 1984). Thus, while the IMIF was meant as a theoretical model for understanding social influence in small interactive groups, our research shows a broader applicability. Rather than requiring different psychological theories for different types of groups (as for example implied by Prentice et al, 1994), our "broader" IMIF may be used as a single theoretical model for understanding the relation between the individual and all sorts of groups.

Categorical and dynamic processes across cultures. The distinction between groups in which categorical processes play a stronger role and groups in which dynamic processes play a stronger role could also be relevant to issues in the cross-cultural literature. On the one hand, cross-cultural researchers (e.g. Triandis, 1989; Triandis, Bontempo, Villareal, Asai, & Lucca, 1988) have suggested that individuals within collectivistic cultures are more likely to define themselves in group terms and behave in line with group norms than individuals in individualistic cultures. At the same time, cultural researchers have criticized the traditional social identity approach (e.g. Yuki, 2003) for being too Western in its assumption that there would be strong contextual variability in the self-concept, and not really "fitting" with the permanence of the relational structures found in collectivistic cultures. The idea here is that in collectivistic cultures, individuals and groups are framed more in terms of networks of relations rather than in terms of independent individuals belonging to one or multiple social categories (as in individualistic cultures; see Brewer & Chen, 2007). However, the IMIF considers the relation of dynamic processes within groups to the categorical processes of shared social identity perception. So, just as it appears relevant to consider both categorical and dynamic processes in western contexts it might also be relevant to consider both in highly interdependent or collectivistic cultures. This underscores that the strict division between a "Western" individualistic or independent and "non-Western" collectivistic or interdependent social structure may be too black and white. Indeed, certain collectives appear to operate as much (if not more so) on a relational, interdependent basis in the West as in the East (e.g., Matsumoto, Weissman, Preston, Brown, & Kupperbusch, 1997). Future research could begin to explore whether it might be useful to also

separate categorical processes from dynamic processes in collectivistic cultures (cf. Brewer & Chen, 2007).

What are the Consequences of Inductive Social Identity Formation?

Although our research supports the IMIF prediction that deductive and inductive processes of social identity formation can be differentiated, and confirms that both can lead to approximately equal levels of solidarity, entitativity and cooperation, we also found some evidence that some consequences of inductive and deductive social identity formation may be quite different. In particular we examined in Chapter 4, whether inductively formed social identities might leave more room for the expression of individuality than deductively formed social identities do.

The results in Chapter 4 on average provided support for our hypothesis: Individuals within groups perceived to be heterogeneous formed a stronger social identity inductively than deductively, and hence expressed themselves in more idiosyncratic ways by going against pre-established group norms. However, we should note that the effects were less clear than expected. First, the effect was weaker and non-significant in the second study. It could be that due to the clear presence of an outgroup in this study, group members needed to balance their allegiance to the ingroup with their expression of pro-outgroup arguments. Second, within groups perceived to be homogenous, we found the opposite effect; groups formed a stronger social identity deductively than inductively, and also expressed themselves in more idiosyncratic ways when social identity was deductively formed. Thus on average, group members were expressing more norm-inconsistent arguments in those instances in which social identity was strongest.

Elaboration on the traditional social identity perspective. Our findings qualify the traditional social identity perspective on the relation between social identity and individual behaviour. According to self-categorization theory, individuals align their behaviour with group norms as a consequence of social identity formation (Turner, Hogg, Oakes, Reicher, & Wetherell, 1987; Hogg & Turner, 1987). However, we found that social identity may be more positively related to norm-deviance than has hitherto been assumed (see also Hornsey, 2006; Packer, 2008). We suggested that individuals within groups perceived to be heterogeneous form a stronger social identity inductively out of individual contributions, and may therefore interpret those norms as organically emergent and therefore less prescriptive and fixed, allowing them to express norm-inconsistent arguments. It might be that deductively formed social identity may result in norm-deviance for different reasons. That is, within homogeneous groups with a strong deductive social identity, high identifiers and prototypical group members may experience enough psychological safety to express norm-inconsistent arguments (Edmondson, 1999; Paulus & Dzindolet, 2008) and/or may make strategic choices to do so (Packer 2011; Morton et al., 2007). Future research could begin to explore whether the reasons why group members go against group norms are dependent on the process of social identity formation, as the expression of idiosyncratic and norm-inconsistent arguments can make groups more creative (cf. De Dreu & West, 2001; Swann et al., 2000).

Openness of the social identity. Although, for now, we cannot draw firm conclusions about the extent to which deductively and inductively formed social identities may have different outcomes, theoretically we assume that groups that have inductively formed a social

identity might be more "open" than groups that have deductively formed a social identity.

In particular, inductively formed groups might be more open to outgroups. According to SIT, individuals need to achieve positive ingroup distinctiveness to gain a positive social identity, and this might *in some cases* result in ingroup favouritism and outgroup derogation (Tajfel, 1978a). In addition, according to optimal distinctiveness theory (Brewer, 1991), individuals will identify with highly distinctive groups to achieve optimal distinctiveness. However, as inductive social identity formation does not require an outgroup and allows for a satisfaction of the need for distinctiveness within the group, the distinctiveness from other groups might be less relevant and so might be ingroup favouritism and outgroup derogation. Future research could begin to explore the possibilities of inductive social identity formation for intergroup relations.

Furthermore, groups that have inductively formed a social identity might be more open to new members and their "fresh" input, as differences are integrated in the group's identity through inductive processes. However, the opposite hypothesis could also be argued. When a social identity is deductively formed, new members only need to be similar or assimilate to the group in order to be accepted. In contrast, new members to an inductively formed group might have a hard time fitting in, as they themselves did not contribute to the group's identity.

Stability and flexibility of the social identity. These possible, alternative hypotheses highlight a new question in the IMIF: How stable or open to change are social identities formed through inductive processes? Group-doing seems important for inductive social identity formation (see Chapter 5). Therefore, the group's identity may erode if the necessity for

acting together vanishes. At the same time, the group's identity may be open to continuous change as long as (new) group members continue to do things together and contribute to the group's identity. Future, research could begin to explore the stability and flexibility of inductively formed social identities.

Is it still social identity? Given these potential different outcomes of deductive and inductive social identity formation, one can wonder whether the social solidarity that emerges through inductive processes can still be considered a social identity. Tajfel (1978a) defined social identity as "that part of an individual's self-concept which derives from his knowledge of his membership of a social group (or groups) together with the value and emotional significance attached to that membership". This operationalization seems to fit with what was formed through inductive social identity formation (i.e. identification, entitativity, and group-cooperation). Still, what social identity entails might be slightly different for deductive and inductive social identity formation.

First, the cognitive perception of the social identity may be different. Whereas deductive social identity formation may result in a perception of the group as a distinctive social category, inductive social identity formation may result in a perception of the group as a dynamic entity (cf. Wilder & Simon, 2008) or social network (cf. Igarashi & Kashima, 2011). Second, the "group" that inductively forms a social identity may be different. Whereas deductive social identity formation requires clear group boundaries, inductive social identity formation may just as well occur in a social network composed of a set of individuals and relationships connecting them.

But even though the group itself may be perceived differently, and may have different physical qualities, to the extent that a social identity is formed, the group becomes part of one's self-concept. Thus, our group memberships play an important role in who we are and what we do, regardless of *how* social identity is formed.

General Implications and Conclusions

We believe that adopting our new (more organic) perspective on how individuals co-operate to dynamically construct a sense social identity does justice to the complex interplay between the individual and the group in modern Western society.

In today's society, many fear that increased individualization will erode social solidarity. That is, the achievement of individual freedom and autonomy is feared to come with increased selfishness and unwillingness to take the interest of the collective at heart. Still human beings are often described as inherently social beings, and research suggests that societal solidarity may not be eroding at all (De Beer & Koster, 2009; Savelkoul, Gesthuizen, & Scheepers, 2011).

This dissertation suggests that a more nuanced understanding of the relation between individualization and social solidarity is at place. On the one hand, solidarity within some groups or communities (such as churches and the army) that clearly prescribe how individuals should be, may erode. The top-down creation of social solidarity by focusing on commonalities is unlikely to bring distinctive individuals together. On the other hand, individuals may use their individual freedom to actively create new communities together, such as setting up a communal garden or a dinner club. Through these bottom-up initiatives, individuality and social solidarity

can become mutually interdependent. This form of social solidarity may be fostered by increased individualization.

Thus by building solidarity from the bottom-up, the queen's Christmas wish may be fulfilled: Social solidarity that allows for the full expansion of the individual and society not falling apart.

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DUTCH SUMMARY (NEDERLANDSE SAMENVATTING)

De samenleving is de afgelopen decennia steeds individualistischer geworden (zie SCR, 1998, voor de statistieken in Nederland). Veel mensen zijn bang dat deze winst aan individuele vrijheid ten koste gaat van sociale cohesie en solidariteit. De algemene aanname is dat het individu en het collectief elkaars tegenovergestelden zijn. Een samenleving is *ofwel* individualistisch en verdeeld *of* collectivistisch en saamhorig. Een groep is *ofwel* heterogeen en conflictueus *of* homogeen en verbonden. Een individu is *ofwel* afwijkend en alleen *of* gelijk en verbonden. Met andere woorden, de gedachte is dat de distinctiviteit van het individu de eenheid en cohesie van het collectief ondermijnt. En andersom, dat een sterk collectief de distinctiviteit van het individu bedreigt. Maar is deze aanname juist? De vraag die centraal staat in dit proefschrift is of het mogelijk is om groepen te vormen waarbinnen individualiteit en saamhorigheid samengaan.

De aanname dat het individu en de groep tegenover elkaar staan, vinden we ook terug in de sociale wetenschappen (zie Tilly, 1973, voor een overzicht). Binnen de sociale psychologie is dit idee onder meer te vinden in de sociale identiteitsbenadering (Tajfel & Turner, 1979; Turner, Hogg, Oakes, Reicher, & Wetherell, 1987). Deze benadering gaat ervan uit dat individuen een deel van hun identiteit (hun *sociale* identiteit) ontlenen aan hun groepslidmaatschap. Zij stelt dat mensen een gedeelde sociale identiteit vormen op basis van wat zij gemeenschappelijk hebben en wat hen anders maakt dan andere groepen (bijvoorbeeld 'wij' Groningers vs. 'zij' Friezen). Dit proces van sociale identiteitsvorming wordt ook wel *deductieve*

(categorische) sociale identiteitsvorming genoemd en laat weinig ruimte voor individualiteit. Ten eerste is het lastiger een gedeelde identiteit te vormen op basis van gelijkheid, als groepsleden meer van elkaar verschillen. Ten tweede gaat de sociale identiteitsbenadering ervan uit dat individuen hun gedrag in overeenstemming brengen met de normen van de groep en individuele verschillen naar de achtergrond drukken op het moment dat zij zich definiëren in termen van een gedeelde identiteit.

Dit proefschrift toetst de veronderstelling dat sociale identiteitsvorming ook anders kan, daarbij voortbouwend op het interactieve model van identiteitsvorming in kleine groepen (Postmes, Haslam, & Swaab, 2005a). Dit model suggereert dat wie 'wij' zijn niet enkel bepaald wordt door wat 'ons' anders maakt van 'hen', maar ook door de verschillende identiteiten van individuen binnen onze groep. Individuen in interactie dragen bij aan de vorming van een gedeelde sociale identiteit. Dit proces van sociale identiteitsvorming wordt *inductieve* (dynamische) sociale identiteitsvorming genoemd. In dit proefschrift hebben we onderzocht in hoeverre inductieve sociale identiteitsvorming mogelijk is in verschillende groepen en of via deze weg individu en groep elkaar wederzijds kunnen versterken.

Om ons idee te toetsen hebben wij ons in de verschillende hoofdstukken gericht op enkele aspecten van sociale identiteitsvorming waarbij wij verschillende uitkomsten verwachten bij deductieve en inductieve processen. Hoewel we vanuit deductieve processen kunnen verwachten dat percepties van gelijkheid ten grondslag liggen aan sociale identiteitsvorming, liggen percepties van individuele distinctiviteit mogelijk ten grondslag aan sociale identiteitsvorming via inductieve processen (Hoofdstuk 2). Hoewel we vanuit deductieve processen kunnen verwachten dat heterogeniteit het vormen van een gedeelde sociale identiteit belemmert,

kunnen heterogene groepen mogelijk een gedeelde sociale identiteit vormen via inductieve processen (Hoofdstuk 3). Hoewel we kunnen verwachten dat een deductief gevormde sociale identiteit leidt tot conformiteit aan groepsnormen, kunnen expressies van (normafwijkende) individualiteit mogelijk het gevolg zijn van een inductief gevormde sociale identiteit (Hoofdstuk 4). Tot slot, hoewel we kunnen verwachten dat intra-groepsdynamiek onnodig is voor deductieve sociale identiteitsvorming lijkt intra-groepsdynamiek wel nodig voor het induceren van een gedeelde identiteit (Hoofdstuk 5).

Hoofdstuk 2

In Hoofdstuk 2 laten we zien dat inductieve processen van sociale identiteitsvorming in allerlei soorten groepen worden waargenomen en dat het waarnemen van individuele distinctiviteit een onderliggend proces is van inductieve sociale identiteitsvorming. We vinden bevestiging voor ons model dat hoe meer individuen een groep zien als inductief gevormd, hoe meer zij zichzelf zien als distinctief. Dit is vervolgens gerelateerd aan het waarnemen van meer groepseenheid, wat vervolgens weer gerelateerd is aan meer groepsidentificatie. In Studie 2.1 wordt ons model gevalideerd voor kleine groepen (4-15 leden). In Studie 2.2 bevestigen we ons model voor verschillende *typen* groepen (i.e. intieme groepen, werkgroepen, sociale categorieën en losse verbanden). In Studie 2.3 laten we zien dat groepsgrootte gebruikt kan worden als predictor van inductieve sociale identiteitsvorming: Hoe groter de groep, hoe minder groepsleden inductieve sociale identiteitsvorming waarnemen. Tegelijkertijd laten we zien dat ons model nog steeds gevalideerd kan worden voor grotere groepen. Ook in groepen van boven de 200 personen vinden we dat de waarneming van individuele distinctiviteit een onderliggend proces is van inductieve sociale

identiteitsvorming. Via het waarnemen van inductieve processen kunnen groepsleden dus hun waargenomen distinctiviteit in overeenstemming brengen met groepslidmaatschap.

Hoofdstuk 3

De vragenlijststudies in Hoofdstuk 2 geven inzicht in hoe de relatie tussen individuele distinctiviteit en groepslidmaatschap wordt waargenomen door individuele groepsleden. Dit zegt echter nog niks over de mate waarin waargenomen individuele verschillen samen kunnen gaan met een gedeelde sociale identiteit binnen een echte groep, waarin ook andere groepsleden invloed hebben op de vorming van de gedeelde sociale identiteit. Met andere woorden, het geeft nog geen antwoord op de vraag of individualiteit en *gedeelde* sociale identiteit kunnen samengaan als andere groepsleden fysiek aanwezig zijn.

In Hoofdstuk 3 laten we daarom zien dat individuen in kleine groepen inductief een gedeelde identiteit kunnen vormen en dat via deze weg individuele verschillen de vorming van een sociale identiteit niet in de weg staan. We hebben dit onderzocht in twee experimentele kleine groepsstudies waarin we manipuleren of groepsleden een sociale identiteit kunnen vormen via een deductief of een inductief proces (Studie 3.1) *en* of de groep als homogeen of heterogeen wordt gezien (Studie 3.2). Als indicatoren van sociale identiteit hebben we de waargenomen eenheid van de groep, de mate van identificatie (Studie 3.1) *en* de bereidheid tot samenwerking (Studie 3.2) gemeten. Deze studies tonen aan dat individualiteit en groepslidmaatschap kunnen samengaan als andere groepsleden aanwezig zijn (i.e. niet alleen cognitief, maar ook interactief) door het vormen van een nieuwe gedeelde sociale identiteit. De resultaten van Hoofdstuk 3 in combinatie met de resultaten van Hoofdstuk 2

suggereren dat individualiteit als input kan dienen voor het inductief vormen van een sociale identiteit.

Hoofdstuk 4

De resultaten van Hoofdstuk 2 en 3 geven nog geen inzicht in de vraag of individualiteit ook een *uitkomst* kan zijn van inductief gevormde sociale identiteit: via inductieve sociale identiteitsvorming kunnen individualiteit en sociale identiteit elkaar mogelijk wederzijds versterken.

In Hoofdstuk 4 tonen we aan dat inductieve sociale identiteitsvorming binnen heterogene groepen ertoe leidt dat groepsleden hun distinctiviteit blijven uiten door argumenten te genereren die tegen de groepsnorm ingaan. Voortbouwend op Hoofdstuk 3 hebben we in twee studies met kleine pseudo-groepen sociale identiteitsvorming en diversiteit gemanipuleerd. Vervolgens hebben we een groepsnorm over een bepaalde kwestie saillant gemaakt. Proefpersonen werden gevraagd zoveel mogelijk (voor- en tegen-) argumenten over deze kwestie te bedenken die ze daarna met de andere groepsleden zouden bespreken. De twee studies verschillen in de kwestie waarover argumenten gegenereerd dienden te worden (Studies 4.1 en 4.2).

De resultaten in Hoofdstuk 4 komen grotendeels overeen met de resultaten uit Hoofdstuk 3 op indicatoren van sociale identiteit. Daarnaast laten ze zien dat inductieve sociale identiteitsvorming binnen heterogene groepen leidt tot het uiten van idiosyncratische argumenten die tegen de groepsnorm ingaan. Daarnaast vinden we, in tegenstelling tot onze verwachting, dat binnen homogene groepen groepsleden juist meer norm-inconsistente argumenten genereren wanneer sociale identiteit deductief gevormd is dan wanneer deze inductief gevormd is. In het algemeen lijkt

een sterkere sociale identiteit het uiten van meer idiosyncratische norm-inconsistente argumenten dus te stimuleren.

Hoofdstuk 5

Hoofdstuk 2 tot en met 4 bieden gezamenlijk een nieuwe kijk op sociale identiteitsvorming door in te zoomen op de interactie tussen individualiteit en groepslidmaatschap. De studies laten zien dat de relatie tussen individualiteit en sociale identiteit afhangt van het proces van sociale identiteitsvorming. Hoewel deze studies zijn gebaseerd op de aanname dat intra-groepsdynamiek een belangrijke rol speelt bij inductie, geven Hoofdstuk 2 tot en met 4 geen inzicht in de mate waarin intra-groepsinteractie *nodig* is voor gedeelde psychologische groepsvorming.

In Hoofdstuk 5 benaderen we deductieve en inductieve processen in sociale identiteitsvorming daarom op een andere manier. We onderzoeken de mate waarin intra-groepsinteractie (groepsdoen) nodig is voor het ontstaan van een gedeelde identiteit. We maken hierbij onderscheid tussen een zelf-definitiedimensie van identificatie (i.e. de mate waarin individuen zichzelf en andere groepsleden waarnemen als één categorie) en een zelf-investeringsdimensie van identificatie (i.e. de mate waarin individuen psychologisch investeren in de groep, zie Leach et al., 2008). Met behulp van een multi-groep multi-level confirmatieve factoranalyse over drie groepsstudies die verschillen in de mogelijkheid tot intra-groepsinteractie, kunnen we onderzoeken in hoeverre intra-groepsprocessen nodig zijn voor het ontstaan van gedeelde identificatie op deze twee dimensies.

Onze resultaten laten zien dat enkel het bestaan van de groep al invloed heeft op de zelfdefinitie van groepsleden, terwijl intra-groepsinteractie nodig is voor groepsinvloed op de zelfinvestering van

groepsleden. Dit suggereert dat hoewel intra-groepsinteractie niet nodig hoeft te zijn voor een gedeelde waarneming van de groep als categorie, intra-groepsinteractie wel nodig is voor het ontstaan van gedeelde solidariteit met de groep.

Wat Hebben We Geleerd?

In dit proefschrift bouwen we voort op het interactieve model van identiteitsvorming (Postmes et al., 2005a) dat suggereert dat zowel deductieve als inductieve processen een rol spelen bij het vormen van een sociale identiteit in kleine groepen.

Ten eerste tonen we aan dat individualiteit en sociale identiteit elkaar niet in de weg staan bij inductieve sociale identiteitsvorming. In tegenstelling tot de algemene aanname binnen de sociale wetenschappen en binnen de traditionele sociale identiteitsbenadering in het bijzonder, kunnen individuele distinctiviteit *en* sterke verbondenheid samengaan net als waargenomen diversiteit *en* eenheid. De relatie tussen individu en groep lijkt dus af te hangen van het proces van sociale identiteitsvorming. Enerzijds lijken individualiteit en diversiteit het vormen van een gedeelde identiteit op basis van gelijkheden (deductie) tegen te werken. Anderzijds kunnen individualiteit en diversiteit samen gaan met solidariteit en identiteit wanneer een gedeelde identiteit gevormd wordt van onderaf uit individuele bijdragen van groepsleden (inductie). Wij denken dat zolang individuen nog met elkaar in contact willen zijn en zolang hun interactie niet draait om de kern van de verschillen, inductieve sociale identiteitsvorming de manier kan zijn om verschillen te verenigen en te benutten.

Ten tweede hebben we het proces van inductieve sociale identiteitsvorming op een meer heldere manier geoperationaliseerd en

gemanipuleerd. Hierdoor is duidelijk geworden dat inductie wezenlijk afwijkt van andere theoretische benaderingen waarin de relatie tussen individu en groep centraal staat. Het proces van inductieve sociale identiteitsvorming verwijst naar een *actief* proces waardoor individuele groepsleden bijdragen aan de vorming van een *gedeelde* sociale identiteit. Sociale identiteit is dus niet enkel gebaseerd op iemands eigen of de van bovenaf opgelegde percepties van (of ideeën over) de groep, maar ook op de inbreng van andere groepsleden.

Ten derde laten we zien dat inductieve processen buiten kleine groepen ook een rol spelen in allerlei andere groepen (ook erg grote groepen). De rol van inductieve processen neemt echter wel af naarmate de groep groter is. Het zou kunnen dat de invloed van individuen op de gedeelde identiteit van grote sociale categorieën meer indirect verloopt: individuen hebben invloed op de sociale identiteit van kleinere subgroepen die uiteindelijk het beeld van een grote sociale categorie kunnen veranderen. Zowel deductieve (categorische) als inductieve (dynamische) processen lijken in meer of mindere mate een rol te spelen in *alle* groepen. Daarom lijkt het belangrijk om zowel de categorische als dynamische kwaliteiten van groepen in acht te nemen als we groepsprocessen en de interactie tussen individu en groep willen begrijpen.

Tot slot hebben we onderzocht of groepen wiens identiteit door inductie tot stand is gekomen ander gedrag kunnen vertonen dan deductief gevormde groepen. We laten zien dat binnen heterogene groepen inductieve sociale identiteitsvorming leidt tot het uiten van meer idiosyncratische (norm-inconsistente) argumenten dan deductieve sociale identiteitsvorming. Daarnaast lijken in tegenstelling tot wat de traditionele sociale identiteitsbenadering voorspelt, leden van homogene groepen niet alleen een sterkere sociale identiteit, maar ook meer norm-inconsistente

argumenten te genereren via deductieve processen dan via inductieve processen. Hierdoor kunnen we geen stellige conclusies trekken over de mate waarin inductief gevormde sociale identiteiten meer norm-inconsistent gedrag stimuleren dan deductief gevormde sociale identiteiten. Op theoretische basis kunnen we echter wel speculeren over de verschillende uitkomsten van de twee processen. Deductieve sociale identiteitsvorming vereist een inter-groepscontext. Hierdoor zijn deductief gevormde groepen mogelijk meer afwijzend tegenover andere groepen dan inductief gevormde groepen. Daarentegen vereist inductieve sociale identiteitsvorming intra-groepsinteractie. Aan de ene kant verzwakt een inductieve sociale identiteit hierdoor mogelijk sneller als groepsleden niets met elkaar hoeven te doen. Aan de andere kant is een inductieve sociale identiteit hierdoor mogelijk opener voor verandering zolang groepsleden met elkaar blijven interacteren.

Conclusie

Men neemt algemeen aan dat toenemende individualisering de sociale solidariteit uitholt. Zo kan het, als gevolg van toenemende individualisering, mogelijk zijn dat bepaalde groepen en gemeenschappen uiteen vallen als groepsleden die zich individu voelen geconfronteerd worden met sterke voorschriften over hoe zij moeten zijn. Ons onderzoek laat zien dat in groepen waarin groepsleden van elkaar verschillen, het lastig is om sociale solidariteit te creëren op basis van de bovenaf opgelegde overeenkomsten. Maar dit proefschrift suggereert tevens dat individualiteit en solidariteit elkaar kunnen versterken. We laten zien dat individuen hun toegenomen individuele vrijheden kunnen gebruiken om (nieuwe) groepen en gemeenschappen te creëren. Via initiatieven van onderaf leveren individuen zo een directe bijdrage aan de vorming van een gedeelde sociale identiteit.

Ons onderzoek laat zien dat het via dit proces van inductie mogelijk is om groepsverbanden te creëren waarin individualiteit en solidariteit elkaar wederzijds versterken.

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KURT LEWIN
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